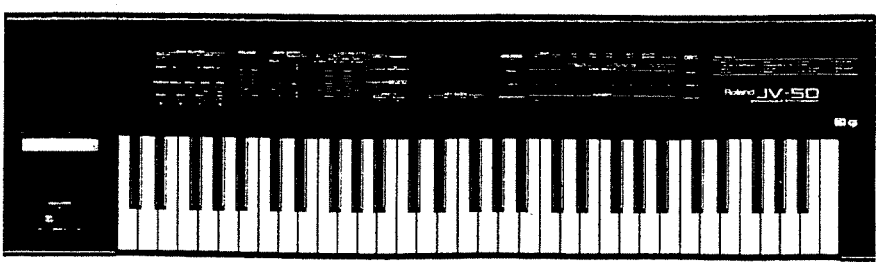
Roland

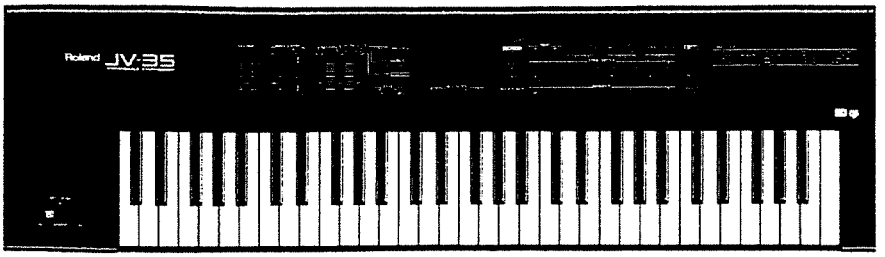
GENERAL MIDI GS

EXPANDABLE SYNTHESIZER

JV-50
JV-35

OWNER'S MANUAL





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● General MIDI System

The General MIDI System is a set of recommendations which seek to provide a way for going beyond the limitations of proprietary designs, and standardize the MIDI capabilities provided by sound generating devices. If you use a sound generating unit which carries the General MIDI logo ( ), you will be able to faithfully reproduce any song data which also carries the General MIDI logo.

● GS Format

The GS Format is Roland's universal set of specifications which ware formulated in the interest of standardizing the way in which sound generating devices will operate when MIDI is used for the performance of music.
If you use a sound generating unit which carries the GS logo ( ), you will be able to faithfully reproduce any commercially available song data which also carries the GS logo.

The product supports both General MIDI and GS.
Song data which carries either of these logos can be accurately reproduced.

* Macintosh is a trademark of Apple Computer Inc.
* Dayna File is a trademark of Dayna Communication Inc.
* MS-DOS is a registered trademark of the Microsoft Corporation.

INTRODUCTION

Thank you and congratulations on your choice of the Roland JV-50/35 Expandable Synthesizer.
Thanks to its wide range of high-quality sounds and its easy-to-use controls, the JV-50/35 is sure to satisfy most everyone; from beginner to seasoned professional.
Moreover, it can easily be used to create ensemble effects, by making use of its multi timbral capabilities.
In order to feel certain that you are familiar with every outstanding feature this unit offers, and to be assured of continuing satisfaction for years to come, please take the time to read through this manual.

● FEATURES

● High-Quality Sounds

A wealth of Preset Tones and Drum Sets are provided. Whether it be strikingly realistic acoustic sounds, or synthesized sounds that are perfect for solo performances, this selection has them.

● 16-Part Multi-Timbral Capability

The JV-50/35 is a 16 Part multi-timbral synthesizer that is capable of taking full advantage of MIDI. When combined with a sequencer or computer, it offers a broad range of compositional and performance possibilities.

● GM/GS Support

The JV-50/35 is compatible with both the GM System and Roland's GS Format. Any music data that complies with the GM System/GS Format can be reproduced accurately on this unit.

● Voice Expandability

The number of voices and sounds you have at your disposal on the JV-50/35 can be increased by simply installing an optionally available Voice Expansion Board. You will then be able to play a larger number of 'Parts' when using a sequencer, and gain access to even more high-quality sounds.

● Four Key Modes

The JV-50/35 offers a total of four different key modes: Dual, Split, Octave1, and Octave 2. These can enhance the unit's creative possibilities and allow you to add 'fatness' to sounds.

● Easy Operation

The unit's buttons and sliders have all been designed to allow easy access to its sounds and functions. While enhancing operational ease, they allow direct, immediate control over the sound editing process.

● Performance Button

The performance button can be used to obtain instantaneous changes in the JV-50/35's settings a convenient performance function.

● Realtime MIDI Control

The JV-50/35 is equipped with three sliders which act as MIDI controllers. They allow you to apply realtime expression to song data.

● 'Minus-One' Playback

This feature allows you to mute any part in the performance data (whether it has arrived at MIDI IN or is played by the SMF Player on the JV-50) and then play that part yourself.

● SMF Player (JV-50 only)

The JV-50 is equipped with a SMF Player which supports Standard MIDI Files. This means that in addition to providing playback of what has been recorded on the JV-50, it can also playback music data created on some other device.

■ Concerning Symbols Used In This Manual

In the interest of simplicity, this manual uses the symbols below to help explain the instrument's operation:

- Words or numbers with Bold indicate panel buttons.
  For example, **PRESET** refers to the Preset button, whereas **TONE GROUP 1** indicates the button for Tone Group 1.
- Wherever arrow symbols appear, such as **PART ◀ / ▶**, or **PARAMETER ▲ / ▼**, it means that you should press one or the other of such buttons, whichever is appropriate for the situation.
- When two buttons are shown like this: **LEVEL+PAN**, it means that you should press **PAN** while holding **LEVEL**.
- Pages to which you can refer for further information are indicated by: (☛ p. **).

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Important Notes

Be sure to use only the AC adaptor supplied with the unit. Use of any other AC adaptor could result in damage, malfunction, or electric shock.

■ Power Supply

- Before connecting this unit to other devices, turn off the power to all units; this will help prevent damage or malfunction.
- Do not use this unit on the same power circuit with any device that will generate line noise; an e circuit motor or variable lighting system for example.
- The power requirement for this unit is indicated on its nameplate (rear panel). Ensure that the voltage in your installation meets this requirement.
- Avoid damaging the power cord: do not step on it, place heavy objects on it, etc.
- When disconnecting the AC adaptor from the power outlet, grasp the plug itself; never pull on the cord.
- If the unit is to remain unused for an extended period of time, unplug the power cord.

■ Placement

- Do not subject the unit to temperature extremes (eg., direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas, or areas that are subject to high levels of vibration.
- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Observe the following when using the JV-50's disk drive. For further details, refer to "Before Using Disks".
  - ○Do not place the unit near devices that produce a strong magnetic field (eg., loudspeakers).
  - ○Install the unit on a solid, level surface.
  - ○Do not move the unit or subject it to vibration while the drive is operating.

■ Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

■ Additional Precautions

- Protect the unit from strong impact.
- Do not allow objects or liquids of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.
- Never strike or apply strong pressure to the display.
- Should a malfunction occur, or if you suspect there is a problem, discontinue use immediately. Contact qualified service personnel as soon as possible.
- A small amount of noise may be heard from the display during normal operation.

■ Memory Backup

- This unit contains a battery which powers the unit's memory circuits while the main (AC) power is off. The expected life of this battery is 5 yeras or more. However, to avoid the untimely loss of memory data, it is strongly recommended that you change the battery every 5 years. Please be aware that the actual life of the battery will depend upon the physical environment especially the temperature in which the unit is used. When it is time to change the battery, consult with qualified service personnel.
- When the battery becomes weak the following message will appear in thedisplay. Please change the battery as soon as possible to avoid the loss of memory data.

  Battery Low!

- Please be aware that the contents of memory may at times be lost; when the unit is sent for repairs or when by some chance a malfunction has occured. Important data should be stored in another MIDI device (eg., a sequencer) or on floppy disk (JV-50 only), or written down on paper (if possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data.

■ Before Using Disks

Handling the drive

- Install the unit on a solid, level surface in an area free from vibration. If the unit must be installed at an angle, be sure the installation falls within the specifiied range: upward; 5°, downward; 35°.
- Avoid using the unit in areas of high humidity (eg., condensation). High levels of humidity can adversely affect the operation of the drive and/or damage floppy disks. When the unit has been transported, alloow it to warm to room temperature before operating.
- To insert a disk, push it gently but firmly into the drive — it will click into place. To remove a disk, press the EJECT button firmly. Do not use excessive force to remove a disk which is lodged in the drive.
- Never attempt to remove a floppy disk from the drive while the drive is operating (the indicator is brightly lit); damage could result to both the disk and the drive.
- Remove any disk from the drive before powering up or down.

■ Handling Floppy Disks

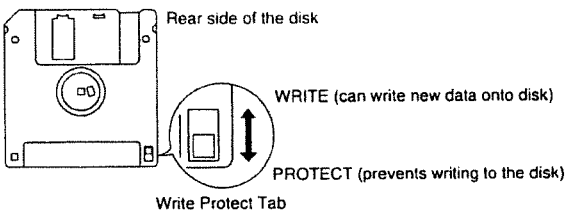
- Floppy disks contain a magnetic storage medium (much like magnetic recording tape). Please observe the following when handling floppy disks:

  ○Neter touch the magnetic medium inside the disk.

  ○Do not subejct floopy disks to temperature extremes (eg., direct sunlight in an enclosed vehicle). Recommended temperature range: 10 to 50°C.

  ○Do not expose floopy disks to strong magnetic fields, such as those generated by loudspeakers.

- Floopy disks contain a "write protect" tab which can protect the disk from accidental erasure. It is recommended that the tab be kept in the "PROTECT" position and moved the "WRITE" position only when you wish to write new data onto the disk.



- All important data should be copied onto backup disk(s). This provides a complete duplicate of the data should the original disk(s) be lost or damaged.
- The identification label should be firmly fixed to the disk. Should the label come loose while the disks is in the drive, it may be difficult to remove the disk.

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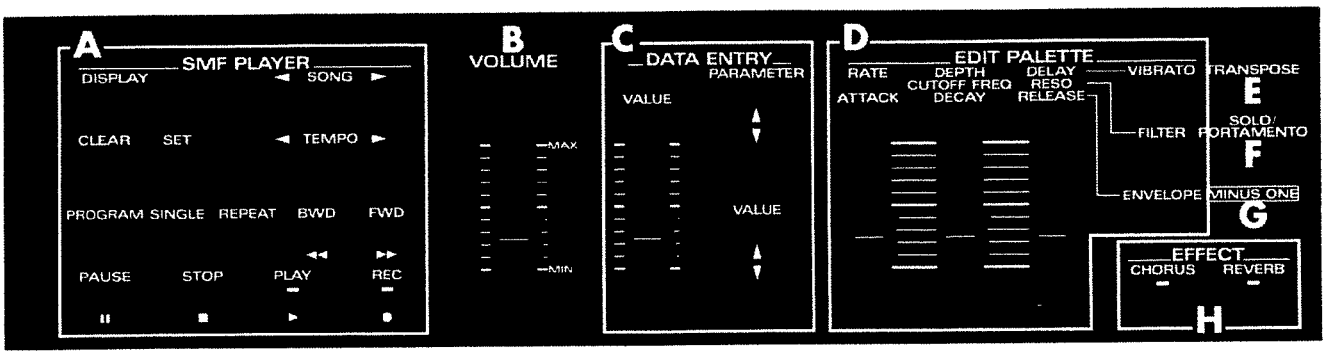
Panel Descriptions

< FRONT PANEL >



A. SMF Player Section (JV-50 Only)

○**DISPLAY**

While the indicator on this button is lit, the information shown in the display will be concerned with the SMF Player section.

○**SONG**

Used to select the song to be played.

○**CLEAR**

Pressed to cancel a setting.

○**SET**

Pressed to confirm a setting.

○**TEMPO**

Adjusts the playback tempo.

○**PROGRAM**

Used to arrange the order in which songs are to be played.

○**SINGLE**

Used to play a single song.

○**REPEAT**

Pressed to have songs repeated.

○**FWD**

With this button you can fast-forward through the song.

○**BWD**

Press this button to backward.

○**PAUSE**

Pressed to momentarily pause song playback.

○**STOP**

Pressed to stop song playback.

○**PLAY**

Pressed to start song playback.

○**REC**

Pressed to begin recording.

B. VOLUME Slider

Adjusts the volume of sound output from the OUTPUT jacks as well as from the PHONES jack.

C. Data Entry Section

Used to change the values of parameters. Use **PARAMETER** to select the parameter that is to be altered, then use **VALUE /VALUE** slider to change its value. The slider can be conveniently used to make broad changes in a value, whereas the buttons are invaluable for finer adjustments.

D. EDIT PALETTE Section

PALETTE slider to edit Tones (instrument sounds). **VIBRATO / FILTER / ENVELOPE** are used to select the parameter type. Then you can use the EDIT PALETTE slider to adjust the value.

E. TRANSPOSE

Switches transposition On/Off. The amount of transposition can be set while **TRANSPOSE** is pressed.

F. SOLO/PORTAMENTO

Turns On/Off the Solo feature (allows play using single sounds). While the indicator is lit, one note plays at a time. While using this feature, a smooth transition in pitch is made between each note played, thus providing a portamento effect. The portamento time can be set while **SOLO/PORTAMENTO** is pressed.

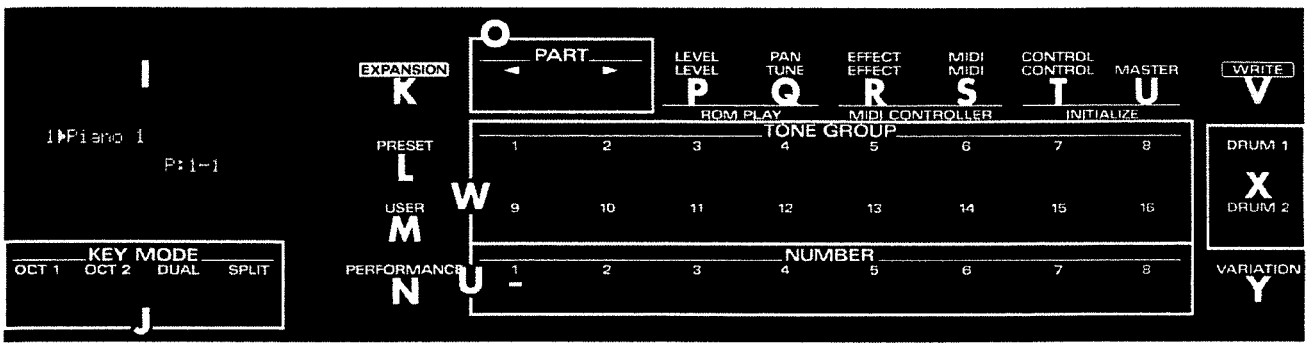
G. MINUS ONE

Allows you to mute what would normally play for the currently selected Part, by having data from MIDI IN or from the SMF Player (JV-50 only) be ignored. That part can then be played only by using the keyboard.

H. EFFECT Section

CHORUS / REVERB

These buttons are used to turn Chorus or Reverb On/Off. When ON, the indicator will light.



I. Display

Displays information such as the currently selected Tone or parameter settings.

J. KEY MODE Section

Used to turn On/Off the desired Key Mode (the indicator for the selected Key Mode will light). While **SPLIT** is held down, the Split Point can be set.

K. EXPANSION

When this button indicator is lit, the sounds on the installed Voice Expansion Board will be available.

L. PRESET

Pressed to select a preset Tone or Drum Set.

M. USER

Pressed to select a Tone or Drum Set that has been edited.

N. PERFORMANCE

Pressed in combination with a Number button to select a Performance.

O. PART

Pressed to switch among the 16 parts available.

P. LEVEL

Pressed to adjust the instrument's overall volume as well as that of each Part.

Q. TUNE/PAN

Pressed to adjust the standard pitch for the instrument and to adjust the panning for each Part.

R. EFFECT

Used to make the settings for the two effects: Chorus and Reverb.

S. MIDI

Used to set the MIDI parameters; both those affecting the JV-35/50 as a whole and those for each Part.

T. CONTROL

Used to adjust the display's contrast and make settings for the various parameters for each Part.

U. MASTER

When this button's indicator is lit, it is used to make settings for the unit's overall functions. When the indicator is dark, it is used to make settings for the functions which can be altered on an individual Part basis.

V. WRITE

Pressed to store an edited Tone or Drum Set into the User Area, as well as to store all of the JV-50/35's settings as a 'Performance.'

W. TONE GROUP 1—16

Used to select among the 16 Tone Groups, including Piano, Chromatic Percussion, etc.

U. NUMBER 1—8

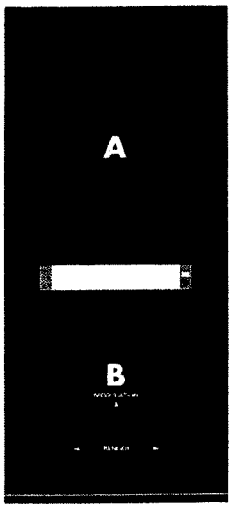
Provide for selection among the eight Tones within a Tone Group. They are also used to select Drum Sets. To select a Performance, hold down a **NUMBER** 1—8 while pressing the **PERFORMANCE**.

X. DRUM1/DRUM2

Pressed to transform a particular Part into a Drum Part. On the JV-50/35, two Drum Sets can be used simultaneously.

Y. VARIATION

When a Variation exists for a Tone specified with the Tone Group and Number buttons, press this button to call up the Variation.



< SIDE PANEL >

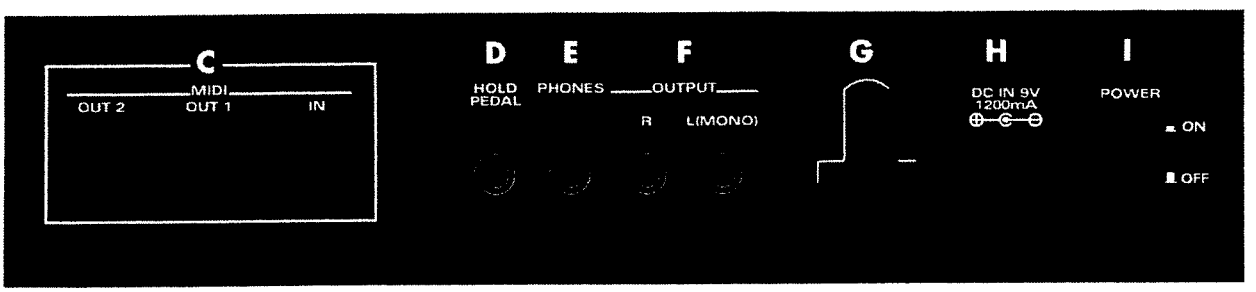
A. Disk Drive (JV-50 only)

The disk drive uses 3.5 inch, 2DD floppy disks. To remove the disk, press the eject button located at the lower right of the disk insertion slot.

B. Bender/Modulation Lever

This lever allows you to raise or lower the pitch of, or add vibrato to, the notes you play.

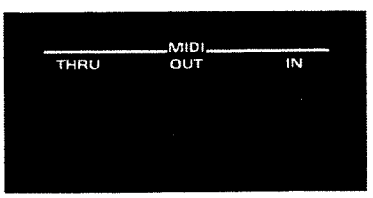
< REAR PANEL >



C. MIDI Connectors

Allow you to use MIDI cables to connect this instrument with other MIDI-equipped units. The MIDI connectors on JV-35 are named differently and function differently from those on the JV-50 (☛ p. 54).

The above picture shows the JV-50. The JV-35 is shown in the following picture.



D. HOLD PEDAL Jack

Accepts connection of an optionally available pedal switch (DP-2, BOSS FS-5U or the like). The pedal will then allow you to turn On/Off the Hold effect.

E. PHONES Jack

Accepts connection of headphones (such as Roland's RH-20/80/120). Even with headphones connected, sound will still be output from the OUTPUT jacks.

F. OUTPUT Jacks

Provide output of the instrument's sounds. These jacks can be connected to an amplifier or mixer.

G. Cord Hook

The adapter cord should be looped around this hook to protect the plug from accidental disconnection.

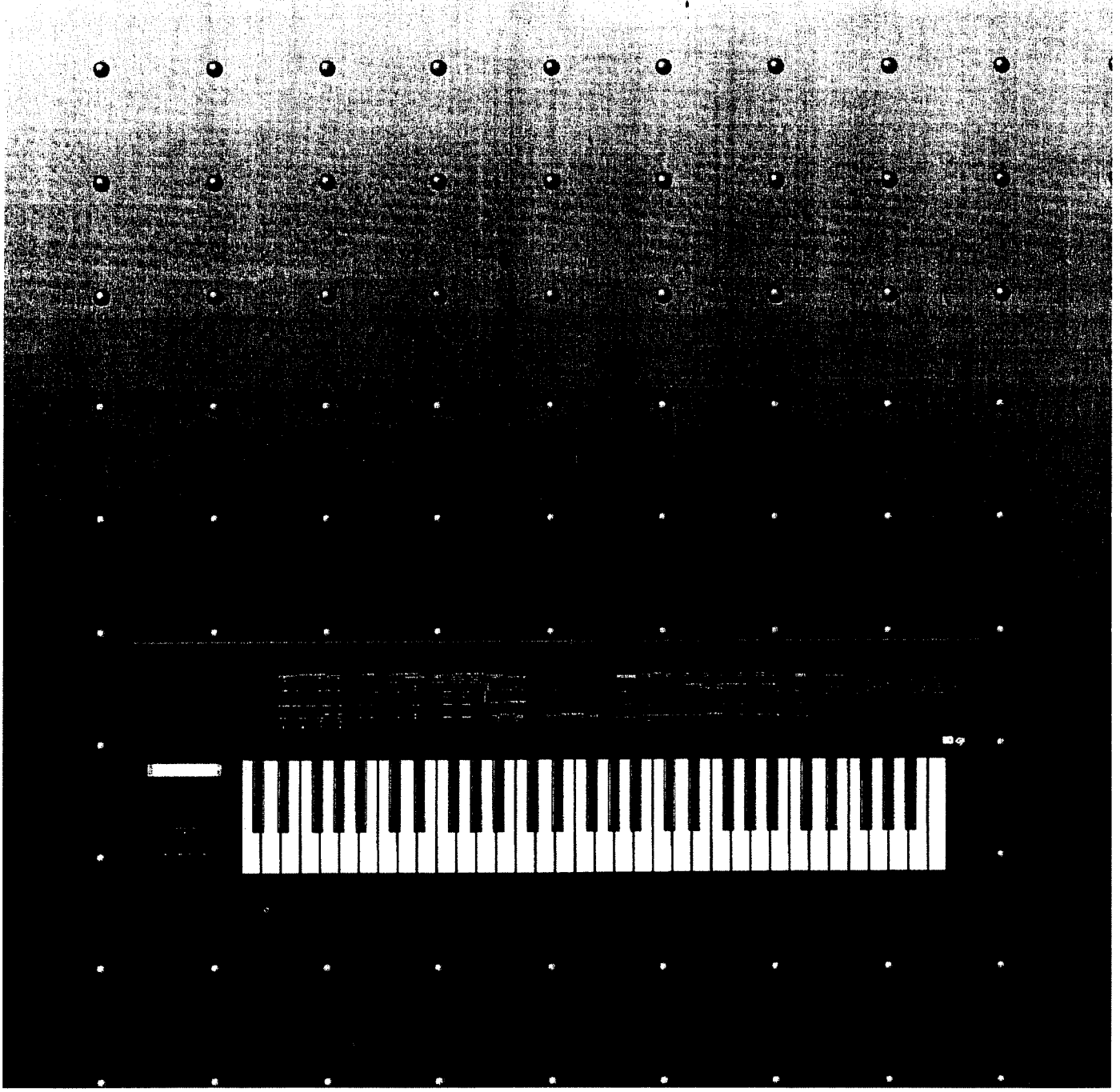
H. AC Adaptor Jack

Accepts connection of the supplied AC adaptor.

I. Power Switch

Turns the unit ON and OFF.

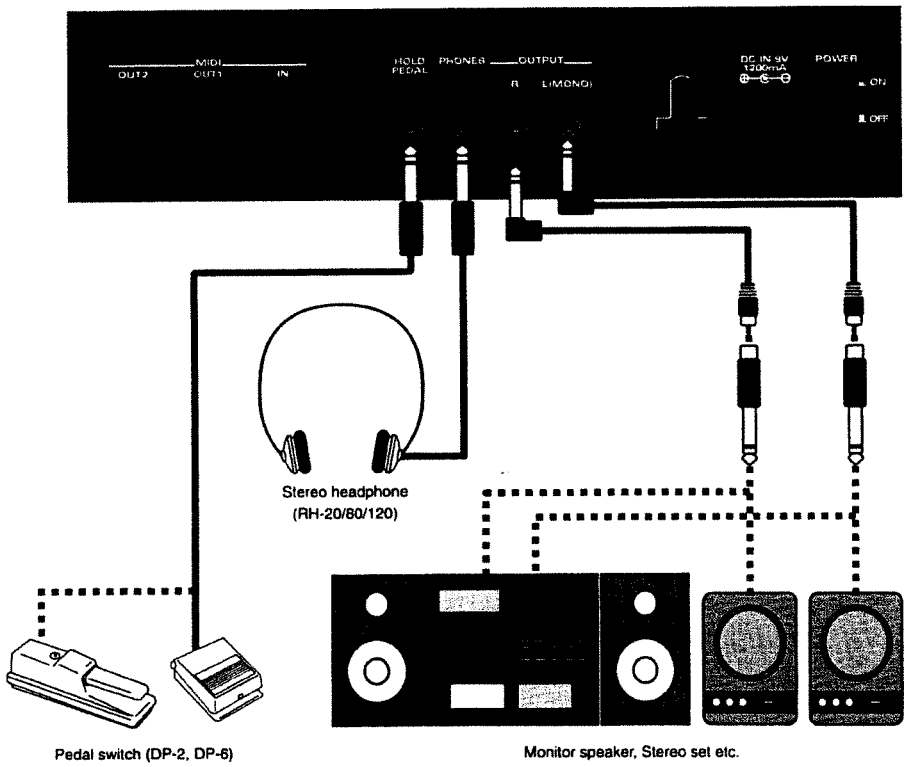
Play some music on your JV-50/35



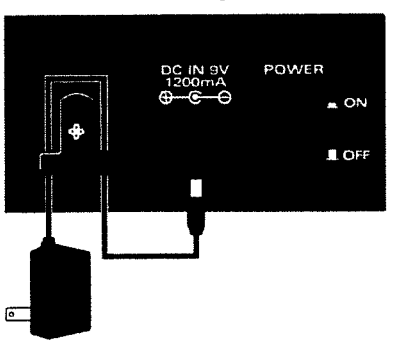
Getting Ready

Before playing your JV-50/35, you will need to connect it with other equipment, such as an amplifier and speakers. Before making such connections, make sure you have the power switch turned OFF on this unit, as well as on all other equipment. Additionally, make sure to have the volume on your amplifier or mixer set at the lowest possible level. This way, you can prevent damage to speakers or other equipment that could result from the noise produced when making connections or turning power on.

Following the illustration below, connect the JV-50/35 with your external devices.



● About the AC Adaptor



Use only the supplied AC adaptor. Use of any other AC adaptor can cause malfunctions or electric shock. The adapter cord should be looped around the hook located to the left of the POWER switch, as shown in the illustration. This prevents the cord from being accidentally pulled out while you are playing.

● About the OUTPUT Jacks

These jacks provide output of the sound signals. They can be connected to an amplifier or mixer, or other unit. In order to get the most out of your JV-50/35, a stereo output is definitely recommended. If you wish to play in monaural, however, use the L (MONO) jack. When connecting to your home stereo or radio-cassette player, remove the adaptor plug from the supplied cable.

* *Pedal switches, MIDI cables, and stereo headphones are all options available from your Roland retailer.*
* *Please use only Roland or BOSS pedal switches. The unit may not operate satisfactorily if you substitute products from another manufacturer.*

■ Turning ON the Power

Once all connections have been completed, power up the system in the following order:

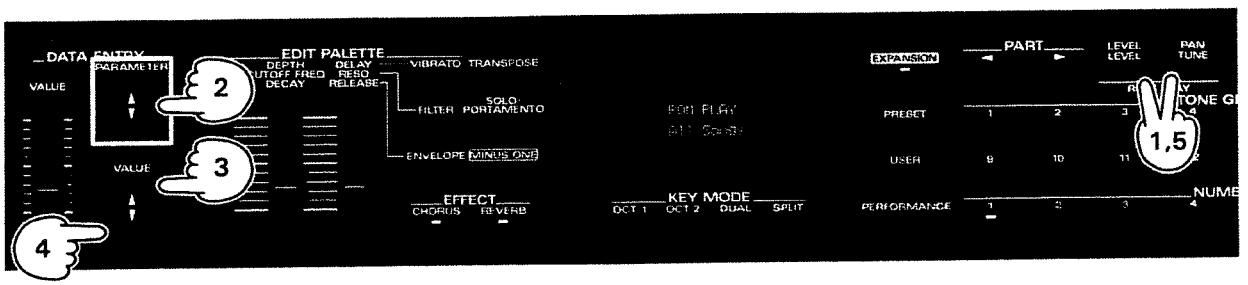
1. **Turn on the JV-50/35.**
2. **Turn on the power to the mixer and/or amplifier.**
3. **Set the volume control on each unit at an appropriate level.**
   You can now play the keyboard, and confirm that sound is produced.

When you're finished playing, power down the system in the reverse order.

* *Due to its circuitry protection feature, this instrument requires a few seconds immediately after power up before it is ready for operation.*

Demo Song Playback

The JV-50/35 has three demonstration songs stored in memory which clearly demonstrate the instrument's superior capabilities.



To hear these demo songs, follow this procedure:

1 **Press LEVEL+PAN.**
The following will appear in the display:

2 **Use PARAMETER ▲/▼ to select the desired song.**
If you do not make this selection, the unit will play all songs, one after the other.

3 **Press VALUE ▲ to start song playback.**

4 **Press VALUE ▼ to stop playback.**

5 **To exit the ROM Play mode, once again press LEVEL+PAN.**
The previous display will reappear.

* *During demo song playback none of the instrument's controls (except for the VOLUME slider) will have any affect.*
* *No performance data from these demonstration songs is output from MIDI OUT.*

■ Song Names/Composer Profiles

Babel's Blunder Music by **John Maul** **Copyright ©1993, Roland UK**
John Maul is a musician, composer and arranger having graduated from the Royal Academy of Music in London. John's work encompasses studio recordings and live performances, including work with top cabaret artists in the U.K. His writing credits include commercilal music for radio and television, as well as scoring jass and classical works. As a product specialist for Roland U.K., John's talents are well utilized in the preparation of support material for educational and instructional use.

Strangers Music by **Mitsuru Sakaue** **Copyright ©1993 Roland Corporation**
Mitsuru Sakaue began composing and doing arrangements for commercials and videos while still in school. In particular, his studio work earned for him a solid reputation. Currently, he produces commercial musics and jingles for FM stations.

Blue Planet Music by **Chong Lim** **Copyright ©1993, BMG Publishing**
Chong Lim is a busy session keyboard player, arranger, producer and composer working mainly in the cities of Melbourne and Sydney, Australia. He has collaborated with many top international artists including Jermaine Jackson, Jenny Morris, Little River Band, The Eurogliders etc. He is also actively involved in the composition of soundtrack music for film and television.

* *You will not be able to listen to "Strangers" if you do not have the VE-JV1 Expansion Board installed in your JV-50/35.*

* *Note: These demo songs are protected by copyright and are intended solely for the demonstration of this instrument and the personal enjoyment of the instrument's owner. These songs cannot be copied or transcribed in any form without the permission of the copyright holder.*
The following provides helpful information to allow you to get to know your JV-50/35 better.

JV-50/35 Overview

■ Inside the JV-50/35

The JV-50/35 combines a keyboard, sound generator, and a collection of controllers (such as sliders). An optional Voice Expansion Board can also be installed.

● Controller Section

This section allows for playing music while also adding expression.
The keyboard controls the pitch and volume of the notes produced while the BENDER/MODULATION lever allows small amounts of pitch fluctuation to be applied to the notes. Additionally, once a hold pedal (available separately) is connected, it can be used to sustain the notes that are played.

● Internal Sound Generating Section

The sound generator produces sound in accord with the performance data it receives from the controller section, MIDI IN, or other source.
The sound generator in the JV-50/35 is multi-timbral, providing 16 parts. Since it supports the GM System/GS Format, it will accurately reproduce a wide variety of commercially available GM /GS music data.

● Voice Expansion Section (Optional)

This section makes expansion readily available (which is one of the more distinctive features of the JV-50/35).
Simply by installing an optionally available VE-GS1 or VE-JV1 Expansion Board, you can greatly enhance the instrument's expressive capabilities, since you immediately increase the maximum polyphony and gain access to a much larger number of sounds.

● SMF Player Section (JV-50 Only)

This section allows you to play commercially available music data in the SMF (Standard MIDI File) format, and record what you play on the instrument. Additionally, the Minus-One function (☛ p. 43) allows you to practice with recorded accompaniment.

About Parts

■ The JV-50/35 is a Multi-Timbral Synthesizer

The JV-50/35 is a 16-Part multi-timbral synthesizer. This means that it can produce a multiple number of instrument sounds at the same time. Parts can be likened to the individual players that make up an orchestra or band. Each 'Part' can use a different sound to produce an individual musical part. In other words, the JV-50/35 is able to play an ensemble that could include up to 16 different instruments.

● Using the JV-50/35 As Part of a DTMS (Desktop Music System)

Multi-timbral synthesizers are ideal for use as the sound generating unit for a DTMS. You can easily produce impressive multi-instrument musical pieces without being bothered by a lot of extra cable connections. Since the JV-50/35 can provide 16 Parts, even complex orchestrations can be handled with relative ease. Additionally, since it supports the General MIDI System/GS Format, it can be used to play General MIDI system/GS Format music data.

For more information about DTMS, please refer to "When Using Desktop Music Systems" (☛ p. 46).

● Using the JV-50/35 for Live Performances

There are probably not many occasions where you would need to simultaneously use a multiple number of Parts and create an ensemble effect when playing live on stage. At such times you will probably want to use one Part at a time, and change to a different one depending on the music. When playing this way, the fact that the instrument is multi-timbral may not really seem that important. However, there are numerous instances where you can enhance what you play by making effective use of the multi-timbral capabilities. Note also that a multiple number of Parts can be used automatically with some of the JV-50/35's performance features. (☛ p. 26)

For more information about playing live, please refer to "Playing Live" (☛ p. 49).

■ Playing the JV-50/35

The collection of sounds in the JV-50/35 includes a variety of acoustic instruments, such as pianos and guitars, as well as synthesized sounds. All these sounds are referred to as "Tones." Additionally, a number of collections of percussive instrument sounds, known as "Drum Sets," are provided as well.
In order to make any of these Tones or Drum Sets available for play, you need to first assign them to a Part. Only those sounds which have been assigned to a particular Part can be played using the keyboard or a sequencer.
Both Tones and Drum Sets can be assigned to Parts. A Part to which a Tone has been assigned is referred to as a "Normal Part."
The JV-50/35 allows you to use two Drum Sets at the same time (Drum Set 1 and Drum Set 2). The Parts to which these Drum Sets have been assigned are referred to as the "Drum 1 Part" and "Drum 2 Part."

Selecting the Part to be Played on the Keyboard

Press PART ◀/▶ and select a Part from 1—16.

You can view the display to confirm which Part is currently selected.
Once selected, you will be able to use the keyboard to play the Tone or Drum Set that is assigned to the Part. For instructions on how to select Tone and Drum Sets, refer to "Abut Tones" (☛ p.18) and "About Drum Sets" (☛ p.21).

The currently selected Part

Normally, only one Part that is shown in the Display is played by pressing the keyboard. In the following conditions, however, more than one Parts is played simultaneously.

- When the Dual or Split Key mode is turned on (☛ p.26).
- When the MIDI receive channels of several Parts are set to the same number as the MIDI receive channel of the Part currently shown in the Display (☛ p.40 "Receive Channel").

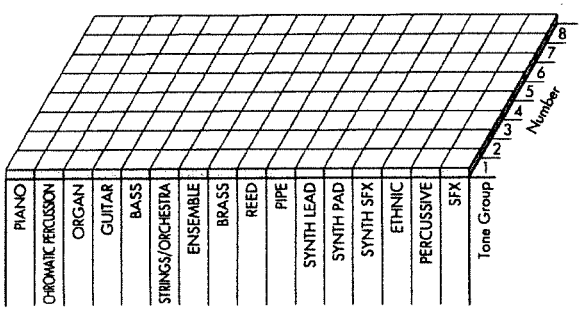
About Tones

Contained within the JV-50/35 is a comprehensive selection of Tones. Select those which you are interested in and try them out to hear how they sound.
There are two types of Tones: Preset and User.

■ Preset Tones

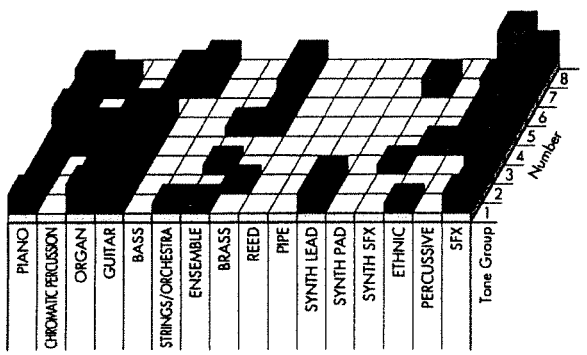
The Preset Tones include all those that were stored in the JV-50/35 when it was manufactured. 226 Preset Tones are provided.
There are two kinds of Preset Tones: Capital Tones and Variation Tones.

● Capital Tones



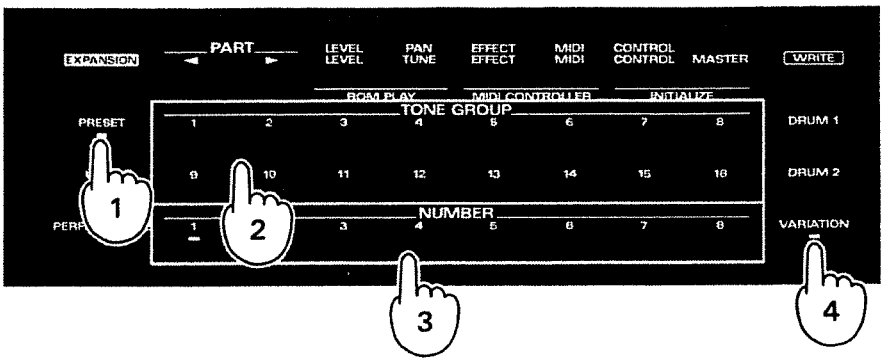
The JV-50/35 comes with a varied collection of Preset Tones. Its sound palette includes a variety of acoustic instruments (such as pianos and guitars), as well as many synthesized and special effects sounds. An important part of this collection are the 128 "Capital Tones."
The Capital Tones are divided into 16 Tone Groups, such as piano, organ and guitar. Within each Tone Group you will find a selection of related Tones, numbered from 1—8. For example, the Piano Tone Group contains the Tones: Piano, Electric Piano, and Harpsichord.
All of the Tones in the white block (16 x 8 = 128) are Capital Tones.

● Variation Tones



The other Tones in a Tone Group (other than the Capital Tones) are known as "Variation Tones." The Variation Tones have essentially the same character as the Capital Tones, but offer a different nuance.
The relationship between Capital Tones and Variation Tones is as shown left. Note that while some Tones may have a number of Variations, others will have none at all. The white block shows the Capital Tones, while those above them (indicated by the gray block) are the Variation Tones.

Selecting Preset Tones



1 Press **PRESET**.

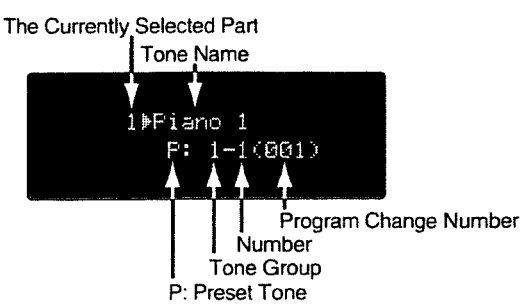
2 Select the Tone Group using **TONE GROUP 1—16.**

3 Select the Number using **NUMBER 1—8.**
This procedure allows you to select Capital Tones.

4 To select a Variation Tone, you will need to press **VARIATION.**
When a Variation Tone is selected, the indicator on **VARIATION** lights up. When there are a multiple number of Variation Tones, press **VARIATION** enough times to select the one you need. When you have finished selecting Variation Tones, the indicator goes out, and you are returned to the Capital Tone.

* *Should you press **VARIATION** when the Tone has no Variation, the indicator will not light, and the Capital Tone remains selected.*

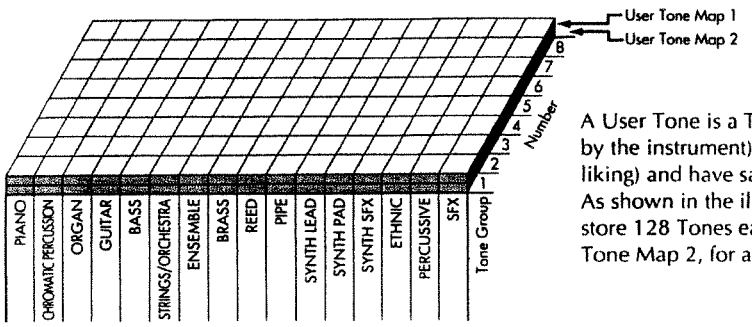
As shown in the illustration below, the name of the selected Tone is shown in the display. Also, the Tone Group and settings for the Number are shown.



When you have the VE-JV1 Voice Expansion Board installed in the JV-50/35, you can select from a much larger number of Preset Tones.
For details, please refer to "Expanding the JV-50/35's Sound Generator" (☛ p.78).

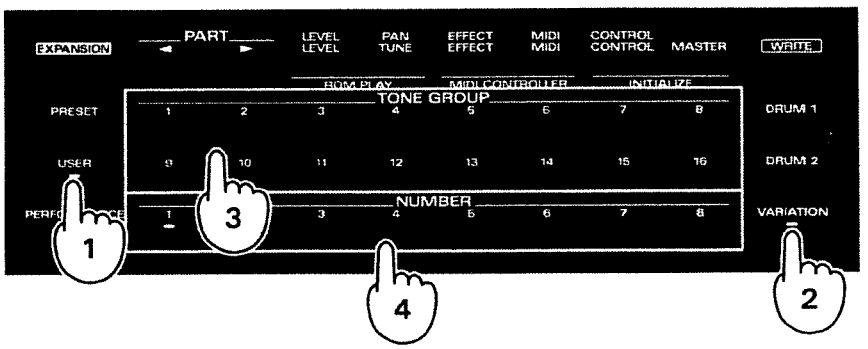
The Program Change Number which corresponds to the Preset Tone is also shown in the display. For details, please refer to "Using MIDI to Select Sounds on the JV-50/35" (☛ p.55).

■ User Tones



A User Tone is a Tone (any of those already provided by the instrument) that you have edited (altered to your liking) and have saved as a new Tone.
As shown in the illustration left, the unit allows you to store 128 Tones each for User Tone Map 1 and User Tone Map 2, for a total of 256 sounds.

Selecting User Tones



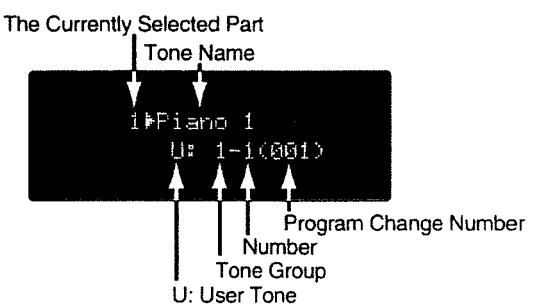
1 **Press USER.**

2 **Press VARIATION and select User Tone Map 1/2.**
You can select Tones from User Tone Map 1 if the indicator on **VARIATION** is dark, and from User Tone Map 2 when it is lit.

3 **Select the Tone Group using TONE GROUP 1—16.**

4 **Select the Number using NUMBER 1—8.**

As shown in the illustration below, the name of the selected Tone is shown in the display. Also, the Tone Group and settings for the Number are shown.



When you have the VE-JV1 Voice Expansion Board installed in the JV-50/35, you can select from a much larger number of User Tones.
For details, please refer to "Expanding the JV-50/35's Sound Generator" (☛ p.78).

The Program Change Number which corresponds to the User Tone is also shown in the display. For details, please refer to "Using MIDI to Select Sounds on the JV-50/35" (☛ p.55).

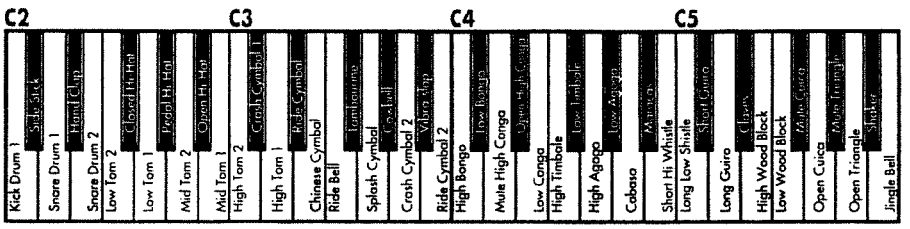
About Drum Sets

The JV-50/35 has 9 Drum Sets which contain a wide range of percussion sounds. Follow the instructions below to select and play the various Drum Sets.
As with Tones, the unit offers Preset and User Drum Sets.

■ Preset and User Drum Sets

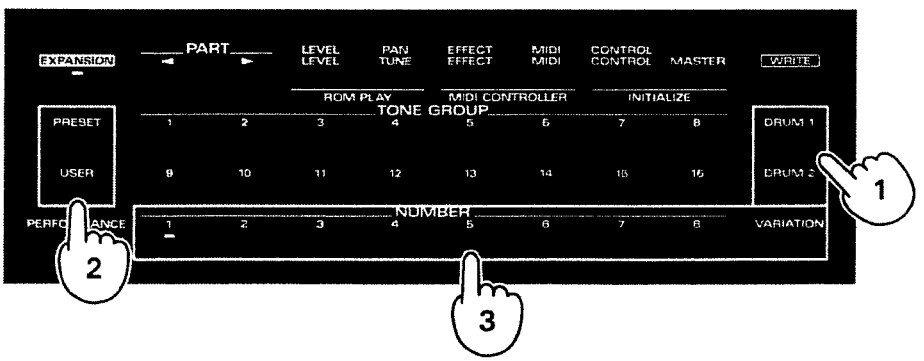
Preset Drum Sets are the Drum Sets which were originally stored in the instrument. There are 9 such Drum Sets. User Drum Sets are Drum Sets which you have edited to your liking. The unit has space to store 9 of these User Drum Sets.

As shown in the illustration below, a different percussive sound is assigned to each key. When you play the keyboard, a different sound will be produced by each key.



* *Different Drum Sets contain different sounds. For details, refer to the "Drum Set Chart" (☛ p.94).*

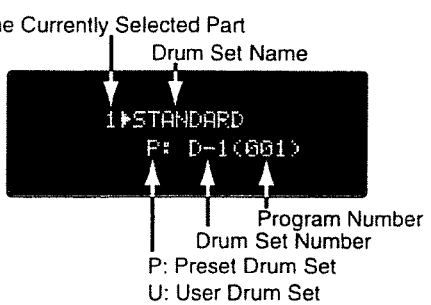
Selecting Drum Sets



(1) Press DRUM 1/DRUM 2.
When you press **DRUM 1**, the currently selected Part is made the Drum 1 Part. When you press **DRUM 2** it becomes the Drum 2 Part.

(2) To select a Preset Drum Set, press PRESET. To select a User Drum Set, press USER.

(3) Press NUMBER 1—8 or VARIATION to select the Drum Set to be played.
The indicator on the button you have pressed will light. After that, you can press keys on the keyboard to play the Drum Set.
As shown below, the name of the selected Drum Set is shown in the display.



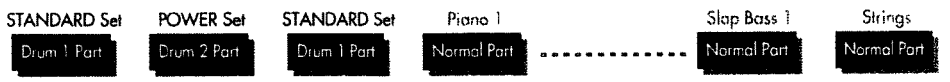
When you have the VE-JV1 Voice Expansion Board installed in the JV-50/35, even more Drum Sets can be selected. For details, please refer to "About VE-JV1 Drum Sets" (☛ p.80).

The Program Change Number which corresponds to the Drum Set is also shown in the display. For details, please refer to "Using MIDI to Select Sounds on the JV-50/35" (☛ p.55).

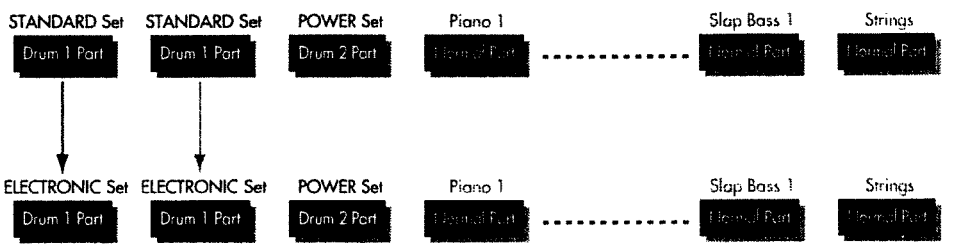
* *To return to a regular Tone after using a Drum Set, press* ***TONE GROUP 1—16*** *to once again select the Tone you wish to use.*
* *When you wish to play a percussive sound that uses a note lying beyond the range of the keyboard, use the Transpose function to shift the keyboard's playing range so the sound can be played (* p.23).*

● Concerning Selection of Drum Sets

As explained above, the JV-50/35 provides for the use of a Drum 1 Part and a Drum 2 Part. As already explained, the JV-50/35 provides for the use of percussion instrument Parts known as the Drum 1 Part and Drum 2 Part. Since any Part can be declared as being a Drum 1 Part or Drum 2 Part, three or more Parts could feasibly be used for playing Drum Sets.



However, only two Drum Sets can be used at the same time, therefore, the Drum Set that can be played in each of Drum 1 Part and Drum 2 Part is the same one. For example, if STANDARD is selected for the Drum Set to be played in Drum 1 Part and POWER set is selected for the one to be played in Drum 2 Part, and Parts 1 and 2 are assigned to Drum 1 Part and Part 3 to Drum 2 Part. Then STANDARD set can be played in Parts 1 and 2, while POWER set can be played in Part 3. If you next change from STANDARD to ELECTRONIC set, Part 2 will automatically be ELECTRONIC set.



The above shows that you must be careful because only two Drum Sets can be used at the same time.

* *If the Voice Expansion Board VE-JV1 is being connected with the JV-50/35, you can use one more Drum Set together with those two, making it possible to use three at the same time.*

Convenient Performance Features

The following provides instruction on how to use (and alter the settings for) a number of functions which enhance the performance capabilities of the instrument.
Some of these functions are turned On/Off with respect to the JV-50/35 as a whole, whereas others can be switched On/Off on an individual Part basis. To allow you to easily distinguish between them, (PART) appears next to items which can be switched On/Off with respect to individual Parts.

■ Effects (PART)

The JV-50/35 is equipped with two effects processors which provide Chorus and Reverb. Both of the effects are more impressive when a stereo output is used.

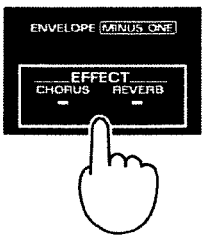
● Chorus

Adds greater spaciousness and 'fatness' to the sound. It is particularly effective when applied to electric piano, organ and string Tones.

● Reverb

Creates the illusion that you're playing in a large concert hall.

Turning Effects On/Off



To turn Chorus ON, press CHORUS. To turn Reverb ON, press REVERB. (The button indicator lights when the effect is on.)
Each time you press the button the effect is turned On or Off.

** If you wish to change the Chorus or Reverb type, or the extent to which the effect is to be applied, refer to "Parameters Called Up Using EFFECT" (☛ p.35).*

■ Transpose

This function allows the keyboard's playable range to be shifted in semitone units.
The Transpose feature is convenient for situations such as those explained below:

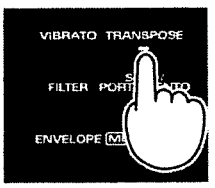
● Accommodating a vocalist's range/making songs in a difficult key easier to play.

When playing in a band, the melody can often move beyond the range that a vocalist can handle, leading to requests that the song's key be changed. For example, you may be required to lower the key by a whole tone, and play a C major song in B flat major instead. However, thanks to the Transpose feature, you can quickly accommodate such situations by changing the keyboard's range, and playing using the fingering you are already used to.
Also, you can use transpositions to allow you to conveniently use the fingering for the C major or A minor keys when playing songs that have a large number of sharps or flats.

● Playing notes beyond the keyboard's range.

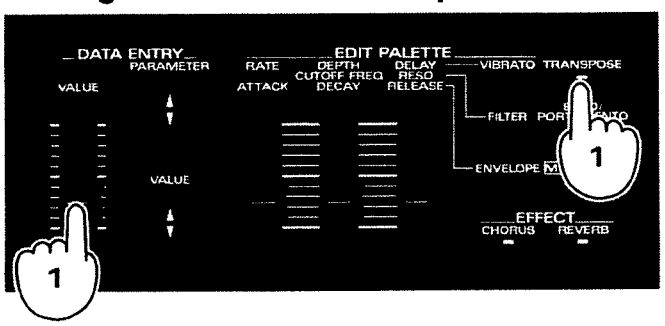
The keyboard on the JV-50/35 has 61 keys (a five-octave range). Understandably, there could be times when you will want to play notes that are higher or lower in pitch than this range. Also, with Drum Sets you will find that there are numerous sounds that ordinarily are beyond the reach of the JV-50/35's range. By using the Transpose feature these situations can be accommodated, since the keyboard can be set to access a broader range of notes.

Turning Transpose ON/OFF



1 When you wish to turn transpose ON, press TRANSPOSE and confirm that its indicator is lit.
Each time you press the button the effect is turned On or Off.

Setting the Amount of Transposition Acceptable Values: -24—0—+24



After Transpose is turned ON, you need to set the amount by which the keyboard's range is to be shifted.
The amount of transposition is set in semitones, within a possible range of +/- 2 octaves.

1 While holding down TRANSPOSE, use VALUE/VALUE slider to set the amount by which the keyboard's range is to be shifted.
The follwing will be shown in the display, so you can check the Transpose setting.

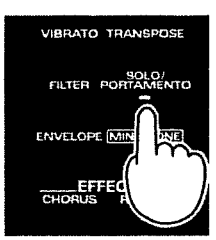
2 Release TRANSPOSE, and the transposition value is stored in memory.
The display will revert to the previous screen.
Since the unit retains this transposition setting, the keyboard will be transposed by the same amount the next time Transpose is turned ON.

** If a setting of "0" has been made for the transposition amount, the indicator on the button will not light when pressed.*

■ Solo/Portamento (PART)

This feature allows you to have notes be played individually. It can be used whenever you wish to have only one note sound at a time, such as for solo pieces, or brass type sounds. At the same time, the Portamento effect will be applied. This effect provides a smooth transition in pitch between one key stroke and the next.

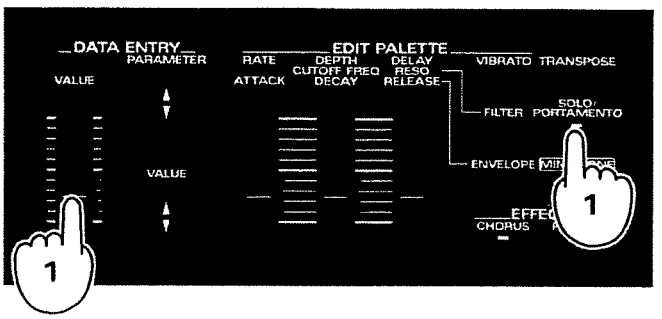
Switching Solo/Portamento On/Off



1 To turn Solo/Portamento ON, press SOLO/PORTAMENTO and confirm that its indicator is lit.
Each time you press the button the effect is turned On or Off.

** When you are using a Drum Set, you will obtain no effect if you press **SOLO/PORTAMENTO**.*
** This effect cannot be turned on at the same time that you also have the Octave 1 or Octave 2 Key Modes in effect.*

Setting the Portamento Time Acceptable Values: OFF, 1—127



Perform the steps below to set the amount of time over which the pitch transition is to occur. The higher the value, the longer the pitch transition time. When set to "OFF," the Portamento effect is turned off, so only the Solo feature will be obtained.

(1) Hold down SOLO/PORTAMENTO and use VALUE/VALUE slider to set the Portamento Time.

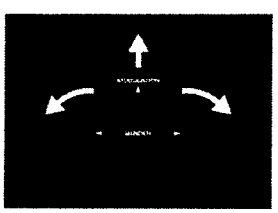
The following will be shown in the display, so you can check the Portamento Time setting.

(2) Release SOLO/PORTAMENTO, and the Portamento Time is stored in memory.

You are then returned to the previous display.

The next time Portamento is turned ON, the same Portamento Time will be placed in effect.

■ Bender/Modulation Lever



When the pitch BENDER/MODULATION lever (located on the left side of the keyboard) is moved to the left/right, it raises or lowers the pitch of the notes played. When pushed forward, it causes a vibrato effect to be added.

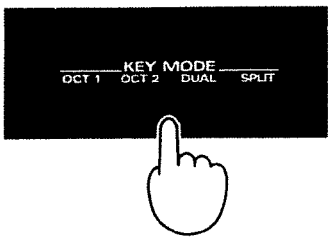
The lever can be used to express things such as string bending on a guitar, or simulate the breath techniques that would occur with a wind instrument. You will probably need to practice with the lever a while until you get precisely the effect you need.

** Concerning the settings available for Bend Range (range within which pitch can be shifted) and Vibrato Depth, refer to "Parameters Called Up Using CONTROL" (☛ p.40).*

Functions Convenient for Live Performances

The JV-50/35 provides four different Key Modes, which allow you to alter the type of expression applied to a Tone, or play two Tones layered together. These modes can be most effectively used when playing live.

Turning Key Modes ON/OFF



To turn ON a Key Mode, press its button and confirm that the indicator is lit.
The mode is turned On/Off each time the button is pressed.
Only one can be turned on at the same time.

**The active Key Mode will remain ON even when different Parts are selected.*

■ About Each Key Mode

● Octave 1

Adds sounds which are one octave lower in pitch to the currently selected Tone. This makes the sound 'fatter.

● Octave 2

In addition to Octave 1, this setting adds sounds which are two octaves lower in pitch.

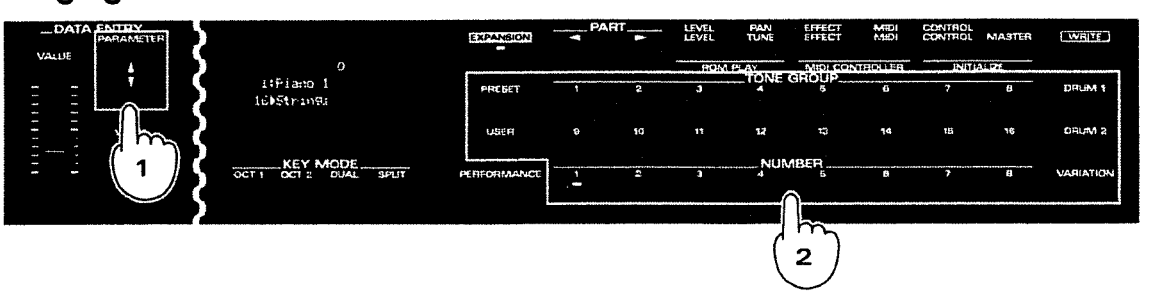
● Dual

The performance data from the keyboard is sent to two Parts. By changing the Tones or Drum Sets assigned to these Parts, you can experiment with a wide variety of combinations.

When Dual is turned ON, the following will appear in the display:

Layers another Tone onto the currently selected Tone. A great range of sounds are possible, depending on the choices made for this combination of sounds.

Changing Tones

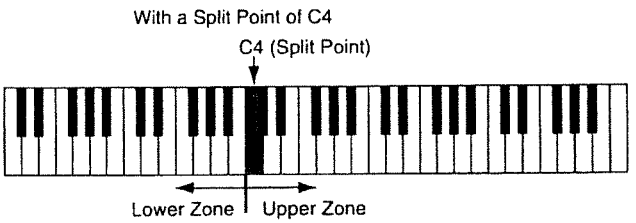


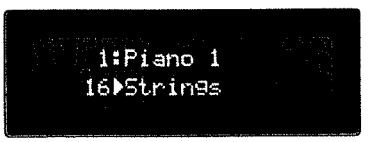
Move the cursor ▶ using PARAMETER ▲/▼, and select the Part for which you wish to change the Tone.
The Tone can be changed for the Part where the cursor appears.

Use the Tone selection buttons to change the Tone.
** The Part where the cursor appears can be changed using* ***PART*** ◀/▶.

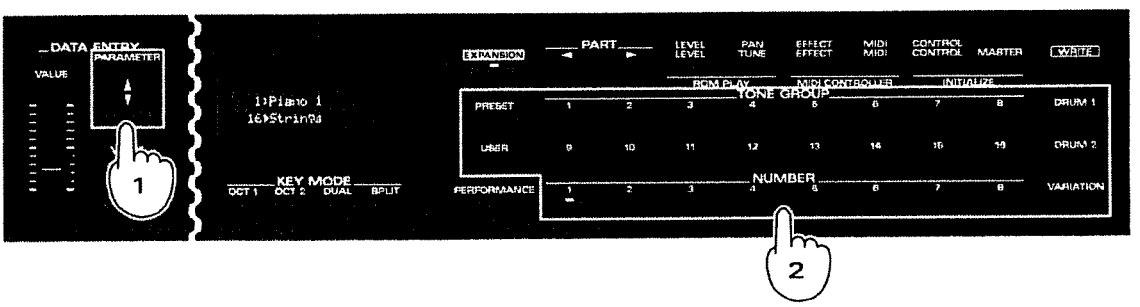
● Split

Allows the keyboard to be split (divided) into two zones, at a specified point (Split Point). It is then possible to play a different Tone in each zone. All keys above and including the Split Point form the Upper zone, while the keys below that make up the Lower zone.



When Split is turned ON, the following will appear in the display:

The Part shown in the upper section of the display is the one that will play in the Upper zone, while the Part shown in the lower section of the display is the one that will play in the Lower zone.

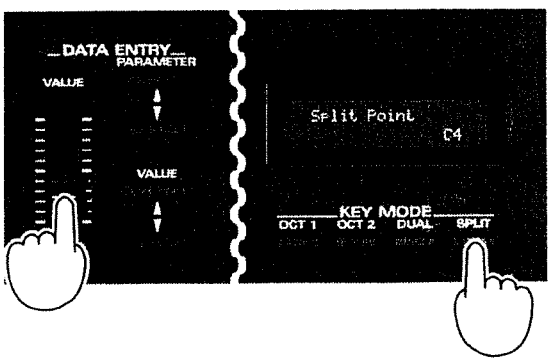
Changing Tones



1 **Move the cursor using PARAMETER ▲/▼ and select the Part for which you wish to change the Tone.**
The Tone can be changed for the Part where the cursor appears.

2 **Use the Tone selection buttons to change the Tone.**
** The Part where the cursor appears can be changed using* ***PART*** ◀/▶.

Setting the Split Point Acceptable Values: C2—C#7



1 **While you hold SPLIT, the current split point will be shown.**

2 **While holding down SPLIT, make the setting for the Split Point using VALUE/VALUE slider.**

3 **Release SPLIT, and the Split Point will be stored in memory.**

● Concerning Use of Key Modes

The following limitations need to be taken into account when using a Key Mode.

○ When using Octave 1, Octave 2

These Key Modes cannot be used simultaneously with Solo/Portamento. Also, the effect cannot be obtained while playing Drum Sets.
Depending on the sound range of the keyboard, correct effect may not be obtained.

○ Dual, Split

These key modes use the two Parts shown in the display. When using a sequencer (or similar device) to play the instrument, you will need to make sure that the Parts being played by the keyboard are not the same as any of the Parts that the sequencer will be playing.

Creating Original Tones

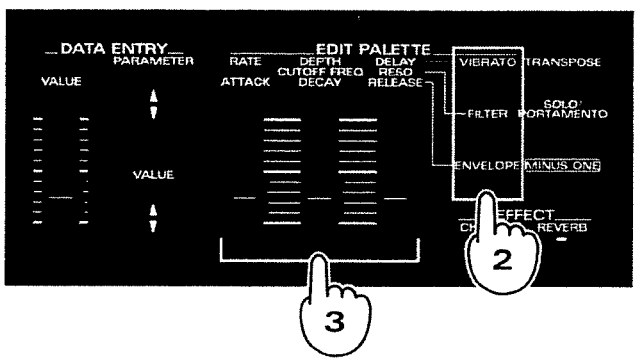
The JV-50/35 allows you to create original Tones by editing the settings for existing Tones. This is known as "Tone Editing."

■ Tone Editing

For every Tone there are 8 parameters (settings) that control how the Tone will sound. These parameters belong to one of three groups (Vibrato/Filter/Envelope) depending on what they do. You can create an original Tone by altering the values of these parameters.

The following explains how to edit the Tones contained in the JV-50/35. If you have a VE-JV1 Voice Expansion Board installed, you can also edit the Tones on it. For details, please refer to "About the VE-JV1 Patches" (☛ p.80).

Editing Procedure



1 Select the Tone which you wish to edit.
Both User Tones and Preset Tones can be selected.

2 Select the parameter group to be edited.
The indicator on the button which has been pressed will light.

3 Using the sliders, alter the value of the parameter.
Depending on the group selected, the parameters which can be edited will change.

Parameter Group	Parameters which can be edited
VIBRATO	RATE (Vibrato Rate)
	DEPTH (Vibrato Depth)
	DELAY (Vibrato Delay)
FILTER	CUTOFF FREQ (Cutoff Frequency)
	RESO (Resonance)
ENVELOPE	ATTACK (Attack)
	DECAY (Decay)
	RELEASE (Release)

* *Tone editing can also be carried out using* ***PARAMETER*** *and VALUE/VALUE slider. In this case, select the Parameter Group and the parameter using* ***PARAMETER*** ▲/▼ *, and make changes in the value using* ***VALUE/VALUE*** *slider.*

To return to where you were originally, press whichever **RESET/USER** is blinking.

Once the value of a parameter has been changed, the indicator on **PRESET/USER** will start blinking. This shows that the Tone has been edited.

* *Note that your changes to a Tone's settings will automatically revert to their original values once you switch to a different Tone. In order to retain the changes you make to a Tone, the "Write Procedure" (☛ p.31)must be performed. This procedure stores the edited Tone at its own memory location.*

■ About the Parameters That Can Be Edited

● Vibrato

The following settings control the manner in which Vibrato (a gentle pitch fluctuation) is applied.

Vibrato Rate
Acceptable Values: -50 — +50
Adjusts the speed of the vibrato.

Vibrato Depth
Acceptable Values: -50 — +50
Adjusts the depth of the vibrato.

Vibrato Delay
Acceptable Values: -50 — +50
This setting allows you to adjust the interval that is to pass from the moment a key is pressed until the moment that Vibrato begins to take effect.

● Filter

The following settings allow you to you alter the nuance of a sound by changing its harmonic content.

Cut-Off Frequency
Acceptable Values: -50 — +16
Sets the frequency at which harmonics will be cut.

Resonance
Acceptable Values: -50 — +50
Provides an adjustment for the amount of emphasis to be placed on the harmonics in the vicinity of the Cutoff Frequency.

● Envelope

The following settings create the change in volume and Cutoff Frequency that will occur over time.

Attack Time
Acceptable Values: -50 — +50
Adjusts the time it takes for the initial portion of a sound (the 'attack') to be heard after a key is pressed.

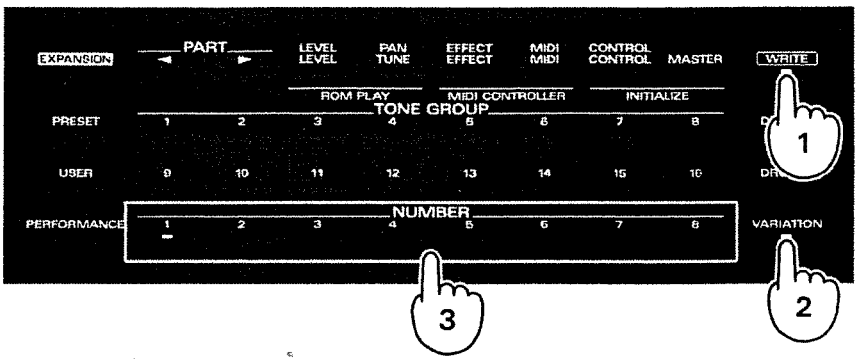
Decay Time
Acceptable Values: -50 — +50
Adjusts the time it will take for the sound to reach the "Sustain Level." The Sustain Level is the point at which most of the volume/cut-off frequency modifications have stabilized.

Release Time
Acceptable Values: -50 — +50
Adjusts the time it takes for the sound to fade away after a key is released.

■ Storing Edited Tones

The process of storing a Tone which you have edited is known as a "Write." The JV-50/35 allows you to store 256 edited Tones (128 for each User Tone Map).

Write Procedure



While holding down WRITE, turn VARIATION ON/OFF to specify the User Tone Map (1 or 2) to which you wish to save. Then press the flashing NUMBER button.

When the indicator on **VARIATION** is dark, the Tone is written to User Tone Map 1. When the indicator is lit, the Tone is saved to User Tone Map 2.
Edited Tones can only be stored in the User Tone location which uses the same **TONE GROUP/NUMBER** combination as the original Tone.

You can cancel the Write procedure if you release the **WRITE** before pressing a Number button.

* *Care should be taken when performing the Write procedure as any Tone that was previously stored at the Write destination will be erased.*

Creating Your Own Drum Sets

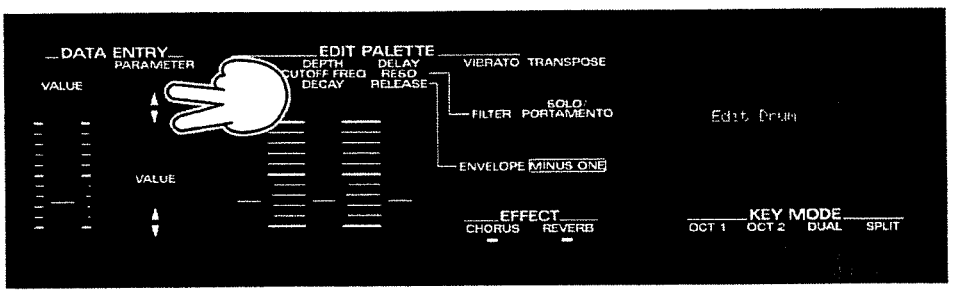
The JV-50/35 allows you to create your own custom arrangements of percussion sounds. Each new arrangement can be stored as a Drum Set.
The following explains how to create original Drum Sets. If you have a VE-JV1 Voice Expansion Board installed, you can edit the Drum Sets it provides as well. For details, please refer to "About VE-JV1 Drum Sets" (☛ p.80).

Editing

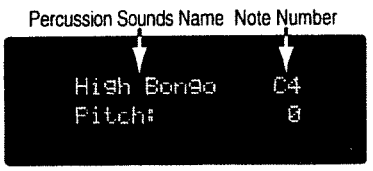
Settings for Drum Sets can be altered using the following parameters.

1 Select the Drum Set that is to be edited.
Either User Drum Sets or Preset Drum Sets can be selected.

2 Press PARAMETER ▲+▼.
The JV-50/35 enters the Drum Edit mode.



3 Select the percussive sound you wish to edit by pressing the key to which it is assigned.
The name of the selected sound and its position on the keyboard are shown in the display.



4 Select the parameter using PARAMETER, and alter its value using VALUE/VALUE slider.
Once you alter the value of a parameter, the indicator on **PRESET** or **USER** begins blinking to show that it has been edited.

5 Press PARAMETER ▲+▼ when you have finished editing the Drum Set.

** When you wish to edit a percussive sound assigned to a note lying beyond the range of the keyboard, first use the Transpose function to shift the keyboard's playing range (☛ p.23).*
** Any changes made in the settings for a Drum Set are only temporary. Once another Drum Set is selected, the settings will revert to their original values.*
Should you wish to retain the edited Drum Set, store it in memory using the Write Procedure (☛ p.33).

Parameters

Pitch
Acceptable Values: -24 — 0 — +24
Adjusts the pitch of the percussive sound in semitone steps.

Level
Acceptable Values: 0 — 127
Adjusts the volume of the sound.

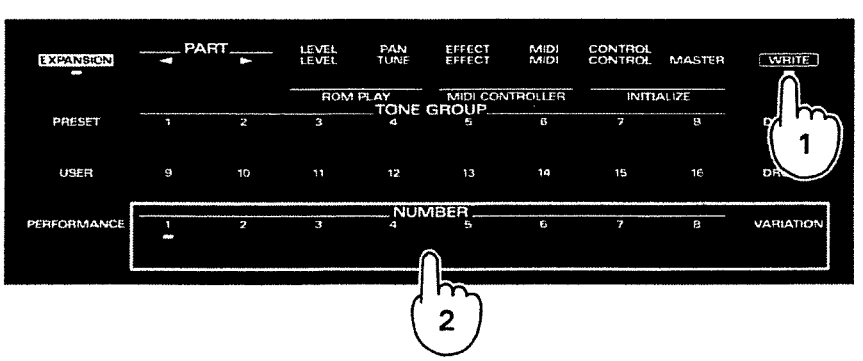
Pan
Acceptable Values: RND, L63 — 0 — R63
Allows you to set the panning (localization of sound image) for each sound (obtained only with a stereo output). With an increase in the value for L, more of the sound will be heard as coming from the left side. Similarly, more of the sound will originate at the right if the value of R is increased.
When set to RND (Random), you obtain a specialized effect whereby the sound randomly moves left and hight with each key stroke.

Reverb Depth
Acceptable Values: 0 — 127
Setting for the manner in which reverb is to be applied.

■ Storing Edited Drum Sets

The Write Procedure allows you to retain the changes you make to a Drum Set by storing them in memory. The destination for this Write will be the User Drum Set (located at the same button as the currently selected Drum Set).

Write Procedure



While holding down WRITE, press a blinking NUMBER 1—8 or VARIATION, and the edited Drum Set will be stored in memory.
You can cancel the Write procedure if you release the **WRITE** before pressing a **NUMBER** or the **VARIATION**.

* *Care should be taken when using the Write procedure; any existing Drum Set at the Write destination will be erased.*

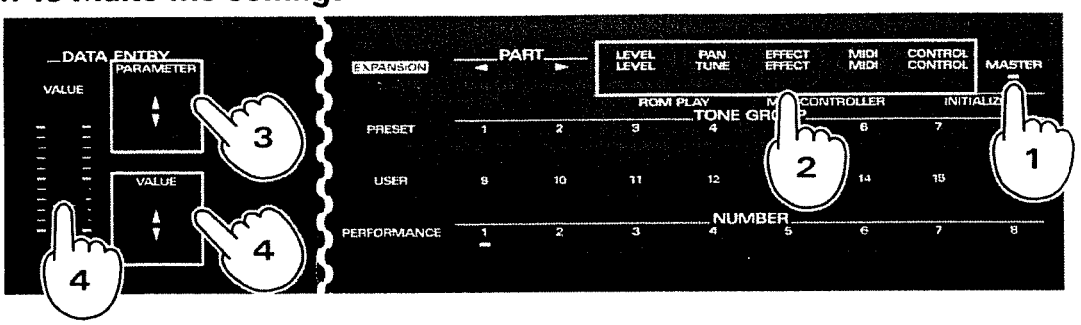
Altering the JV-50/35's Settings

The JV-50/35 makes it easy for you to obtain just the right playing configuration. All you need to do is alter the settings for the wide range of parameters it offers. Some of the parameters will affect the JV-50/35 as a whole (such as Master Tune), while others only affect individual Parts (such as the MIDI transmit/receive channel).

■ Making Changes in Settings Common to the JV-50/35's As a Whole

The following explains the settings for parameters that will affect the JV-50/35 as a whole.

How to Make the Settings



1 Press **MASTER** and confirm that the button's indicator is lit.

2 Press the button (shown in blue) for the function you wish to make changes for.

3 Should there be several items available for the selected function, switch among them using **PARAMETER ▲/▼**.
The function name and its value will be shown in the display.

4 Change the value using **VALUE/VALUE** slider.

5 Once you are finished making settings, press the button for the function which was set last.

** To make changes in the settings for other functions, repeat 2—4.*
** The setting changes you make will remain in memory, even while the power is off.*

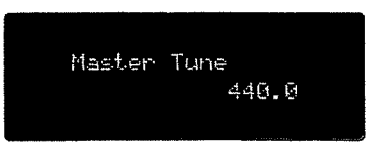
Buttons/Parameters/Setting Ranges

If you have a Voice Expansion Board VE-JV1 installed, please refer to "Making Changes in Settings Common to the VE-JV1 as a Whole" (☛ p.81).

○ Parameters Called Up Using **LEVEL**

Master Level
Acceptable Values: 0—127
Sets the overall volume of the JV-50/35.

○ Parameters Called Up Using **TUNE**



Master Tune
Acceptable Values: 415.3 — 466.2
Adjusts the JV-50/35's standard pitch.

❍ Parameters Called Up Using **EFFECT**

Chorus Level

Acceptable Values: 0—127
Sets the manner in which chorus will be applied.

Chorus Type

Acceptable Values: Chorus 1—4, Feedback Chorus, Flanger, Short Delay, Short Delay (FB)
Provides selection of the Chrus Type for it.

Chorus 1/2/3/4	Standard chorus effect.
Feedback Chorus	Chorus effect that simulates a flanger with soft sound.
Flanger	An effect that is sometimes used to simulate the takeoff and oanding of a jet.
Short Delay	A delay repeated in a short time.
Short Dealy (FB)	A short dealy repated many times.

Reverb Level

Acceptable Values: 0—127
Sets the manner in which Reverb will be applied.

Reverb Type

Acceptable Values: Room 1—3, Hall 1/2, Plate, Delay, Panning Delay
Provides selection of the Reverb Type for it.

Room 1/2/3	Reverb that simulates the natural echo of a room. Sharply defined reverb with a broad spread.
Hall 1/2	Reverb taht simulates the natural echo of a hall. Smooth reverb with greater depth than room.
Plate	This effect simulates Plate Echo (a type of reverb that uses the vibration of metal plates to produce a metallic echo).
Delay	Standard delay effect.
Panning Delay	Delay repetitions pan to left and ritght. This effect can be used if the unit is connected to a stereo audio device. It is effective when the JV-50/35 is connected to a stereo system.

○ Parameters Called Up Using MIDI

Transmit Channel

Acceptable Values: Part, 1—16

Sets the MIDI channel on which the unit will transmit performance data from the keyboard and bender/modulation lever.

When a channel from 1—16 is selected, the unit will send its performance data on that channel. If set to "PART," the unit will transmit performance data on the same channel that the Part being played is set to receive on.

Tone Change Receive Switch

Acceptable Values: ON, OFF

This setting determines whether or not sound change data will be recognized. When ON, the JV-50/35 will switch its Tones in compliance with messages received from an external device.

When set to OFF, Tone changes will not be made under the control of an external device.

GS Reset Receive Switch

Acceptable Values: ON, OFF

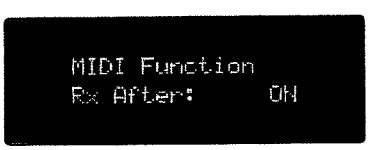
This setting determines whether or not GS Reset data (which will initialize the unit's settings to their defaults) is to be recognized.

System Exclusive Receive Switch

Acceptable Values: ON, OFF

This setting determines whether or not System Exclusive messages will be accepted.

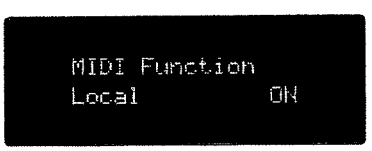
When set to ON, the JV-50/35 will change its settings, or perform other tasks, in compliance with the System Exclusive messages it receives from an external device.



Aftertouch Receive Switch

Acceptable Values: ON, OFF

Determines whether or not Aftertouch messages will be recognized.



Local Control

Acceptable Values: ON, OFF

The Local Control switch determines whether the keyboard controller section (made up of keyboard, switches, bender, etc.) and the sound generating section are connected together or not. When OFF, the sound generator and keyboard will no longer be connected, so sound will not be produced when something is played on the keyboard. However, the data for everything played will be transmitted from MIDI OUT. Also, regard less of the setting for Local Control, the instrument will use its sound gen erator to play whatever performance data it receives from an external unit.

** The Local Control is set to ON every time the instrument is turned on.*

User Bank Select Transmit Switch

Acceptable Values: ON, OFF

This setting determines whether or not Bank Select data will be transmitted whenever you select a User Tone.

For details, please refer to "Using MIDI to Select Sounds on the JV-50/35" (☛ p. 55).

* *The JV-50/35 controls the parameters related with Tones using MIDI NRPN (☛ p.103). If the User Bank Select Transmit Switch is set to ON, User Bank Select and Program Change messages will be transmitted to the MIDI OUT or SMF player when you change tones. When it is set to OFF, User Bank Select messages will not be transmitted but Program Change messages and NRPN messages related with sounds will be transmitted.*

Performance Dump Transmit Switch

Acceptable Values: ON, OFF

This setting determines whether or not data for the Performance will be sent out when the **PERFORMANCE** and a **NUMBER 1—8** are pressed simultaneously.

When set to ON, the settings for a Performance will be transmitted from MIDI OUT whenever one is selected.

Device ID Number

Acceptable Values: 1—32

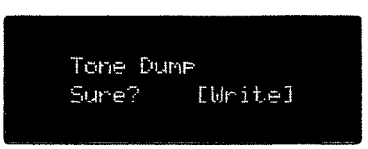
This setting, an identification number given to the unit, allows several units to be distinguished from one another when a multiple number of identical units are being used. Since this number is included within Exclusive messages, it allows units to receive only the Exclusive messages intended for them.

The setting can be any number from 1—32. The default value is 17.

* *You cannot change the Device ID Number of a Voice Expansion Board. It is set permanently to 17.*

Bulk Dump

Provides for the transmission of JV-50/35 data. For details, refer to "Saving the JV-50/35's Data" (☛ p. 52).



Tone Dump

Provides for the transmission of JV-50/35 Tone data. For details, refer to "Saving the JV-50/35's Data" (☛ p.52).

Drum Tone Dump

Provides for the transmission of JV-50/35 Drum Set data. For details, refer to "Saving the JV-50/35's Data" (☛ p.52).

Send General MIDI Setup

When you press **WRITE,** the following MIDI data will be transmitted from MIDI OUT: It is also transmitted to the SMF player on the JV-50.

GM System ON Message (F0 7E 7F 09 01 F7)

Values set for Parts 1 — 16 are as follows:
- Program Change (Cn pp)
- Volume (CC#07: Bn 07 vv)
- Pan (CC#10: Bn 0A vv)
- Reverb Send (CC#91: Bn 5B vv)
- Chorus Send (CC#93: Bn 5D vv)
- Pitch Bend Sens (RPN, CC#06: Bn 65 00 Bn 64 00 Bn 06 vv)

The parameter settings on the JV-50/35 will also be sent to the Part wehre the VE-JV1 is assigned.

* *When you return the Setup data recorded on a sequencer or SMF player to the JV-50/35, be sure to playback the sequencer or SMF palyer in the same tempo as when the data was recorded. If the tempo is altered, the JV-50/35 may not be able to receive the Setup data correctly.*

Send GS Setup

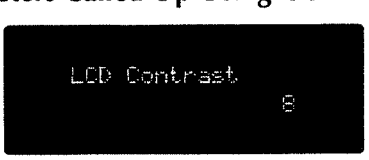
When you press **WRITE,** the following MIDI data will be transmitted from MIDI OUT: It is also transmitted to the SMF player on the JV-50.

GS Reset (Exclusive Message: F0 41 10 42 12 40 00 7F 00 41 F7)
Reverb Macro (Exclusive: F0 41 10 42 12 40 01 30 vv ss F7)
Chorus Macro (Exclusive: F0 41 10 42 12 40 01 38 vv ss F7)
Values set for Parts 1~16 are as follows:
- Use for Rhythm Part (Exclusive: F0 41 10 42 12 40 1x 15 vv ss F7)
- Bank Select (CC#00, CC#32: Bn 00 vv Bn 20 vv)
- Program Change (Cn pp)
- Volume (CC#07: Bn 07 vv)
- Pan (CC#10: Bn 0A vv)
- Reverb Send (CC#91: Bn 5B vv)
- Chorus Send (CC#93: Bn 5D vv)
- Pitch Bend Sens (RPN, CC#06: Bn 65 00 Bn 64 00 Bn 06 vv)

The parameter settings on the JV-50/35 will also be sent to the Part wehre the VE-JV1 is assigned.

* *When you return the Setup data recorded on a sequencer or SMF player to the JV-50/35, be sure to playback the sequencer or SMF palyer in the same tempo as when the data was recorded. If the tempo is altered, the JV-50/35 may not be able to receive the Setup data correctly.*

○ Parameters Called Up Using **CONTROL**



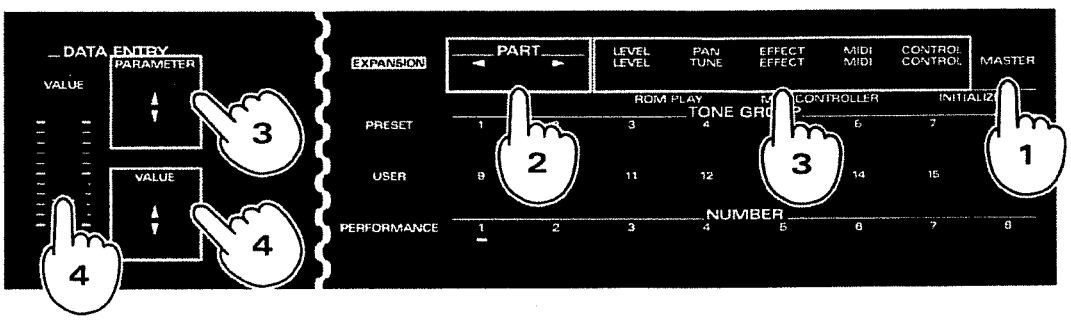
LCD Contrast

Acceptable Value: 1—16
The display may be difficult to read depending on where the JV-50/35 is placed. In such a situation it is possible to adjust the contrast of the display.

■ Altering Settings For Individual Parts

The JV-50/35 offers a complete variety of parameters designed to easily allow you to set up your instrument in the way that best enhances your creativity. The following explains the parameters that can be set for each of the 16 Parts.

How to Make the Settings



1 **Press MASTER and confirm that the button's indicator is dark.**

2 **Press PART ◄/► and select the Part that you wish to alter the settings.**

3 **Press the button (shown in white) for the function you wish to make setting changes for.**
If there are several settings available for the selected function, select among them by pressing **PARAMETER.** The function name and its value will be shown in the display.

4 **Change the value using VALUE/VALUE slider.**

5 **Once you are through making settings, press the button for the function which was set last.**

** To make changes in the settings for other functions, repeat 2—4.*
** The setting changes you make will remain stored in memory, even while power is off.*

Buttons/Parameters/Setting Ranges

If you have a Voice Expansion Board VE-JV1 installed, please refer to (☛ p.83).

○ Parameters Called Up Using LEVEL

Part Level
Acceptable Values: 0—127
Sets the volume for each Part.

○ Parameters Called Up Using **PAN**

Part Pan
Acceptable Values: RND, L63—0—R63
Allows you to set the panning (localization of sound image) for each sound (obtained only with a stereo output). With an increase in the value for L, more of the sound will be heard as coming from the left side. Similarly, more of the sound will originate at the right if the value of R is increased.
When set to RND (Random), you obtain a specialized effect whereby the sound randomly moves left and right with each key stroke.

** Within Drum Sets, each sound is set to a fixed pan location. For this reason, if you change Pan for a Part within a Drum Set, the sound localization for the entire set will move.*

○ Parameters Called Up Using **EFFECT**

Chorus Send Depth
Acceptable Values: 0—127
Sets the manner in which Chorus will be applied to each Part.

Reverb Send Depth
Acceptable Values: 0—127
Sets the manner in which Reverb will be applied to each Part.

○ Parameters Called Up Using **MIDI**

Receive Channel
Acceptable Values: 1—16, OFF
Sound will be produced when MIDI data arrives (on the MIDI channel set here) at the MIDI IN connector.
When set to OFF, sound will not be produced when MIDI data arrives at the MIDI IN connector. (It can be played on the Keyboard.)

Bulk Dump (Part)
Transmits all data for the currently selected Part from MIDI OUT.
For details, please refer to "Saving the JV-50/35's Data" (☛ p.52).

○ Parameters Called Up Using **CONTROL**

Bend Range
Acceptable Values: 0 — +24
Determines the amount of pitch change obtained when the Pitch Bend Lever is moved to either the left or right extreme. The setting is in semitones, for a maximum of 2 octaves.

Modulation Depth
Acceptable Values: 0—127
Sets the depth of the vibrato obtained when the Bender Lever is pushed all the way to the rear. The higher the value, the deeper the vibrato.

•Key Shift
Acceptable Values: -24—0—+24
Allows the pitch of the data generated by playing the keyboard to be shifted in semitone steps. When set to "0," no pitch shift occurs.
This feature conveniently allows you to play music written in a difficult key using a simpler, more familiar fingering. You can simply 'shift' the performance data by as many semitones as needed.
For example, you could set it so you are playing the keyboard as if a song was in C major, even though the song is actually in D major (two sharps).

Velocity Sens Depth

Acceptable Values: 0—127

On the JV-50/35, the strength (velocity) with which you play the keyboard is translated into alterations in the volume or timbra of the sound. The Velocity Sens Depth setting determines the extent to which such alterations will occur. With the setting at a high value, the changes in volume will be quite pronounced; whereas if set to "0," there will be no change in volume no matter how hard yhou play the keys.

Velocity Sens Offset

Acceptable Values: 0—127

This setting dtermines the approximate velocity at which the keys should be stuck in order to obatin alterations in the volume. With values greater than 64, volume fluctuation occurs even when the keys are pressed lightly. With values lower than 64, volume fluction occurs when the keys are pressed firmly.

* *Sounds may not be output depending on the settings. If this occurs, set the Velocity Sens Depth or Velocity Sens Offset to higher values.*

Voice Reserve

Acceptable Values: 0—28

This setting determines the minimum number of voices that will always be reserved and made available for a certain Part. This setting is useful for situations in which the total number of voices that need to be produced may exceed the JV-50/35's maximum polyphony.
For example, if Voice Reserve is set to "6" for a particular Part, that Part will always be able to sound at least 6 voices, even when the unit as a whole is being requested to produce more voices than it is capable of producing at one time.

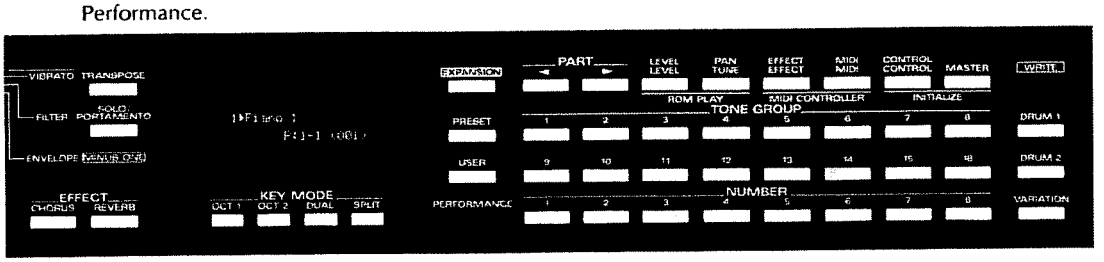
* *Since the maximum polyphony of the JV-50/35 is 28 voices, the values set for Voice Reserve for all Parts combined must add up to 28 or less. If you have the VE-JV1 Expansion Board installed, please refer to "Expansion Voice Reserve" (☛ p.84).*

Instantly Changing the JV-50/35's Settings

The JV-50/35 allows you to save a whole group of settings for a range of functions as one unit known as a "Performance." The following explains how to make the settings for, and use such Performances.

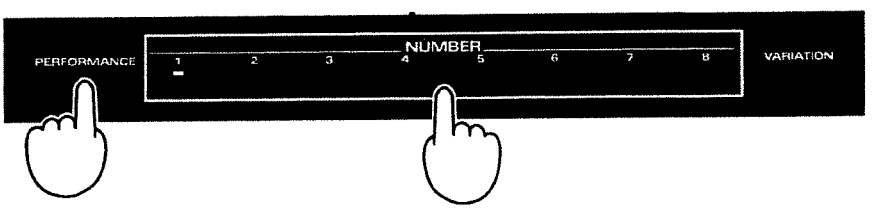
● What Are Performances?

At the simplest level, the JV-50/35 can be played by simply pressing the necessary panel buttons to change Tones, or to turn desired effects on or off. However, considering the numerous features offered, and the number of settings required, it is difficult to skillfully make wide-ranging changes while playing the instrument. For this reason, it is much more convenient to make use of Performances.
A Performance can store information on all the settings for the buttons shown in white below. Up to 8 such Performances can be stored in memory.
A Performance which provides exactly the settings you need can be prepared beforehand. Then, while playing, the whole collection of choices can be switched to instantaneously, simply by selecting that Performance.



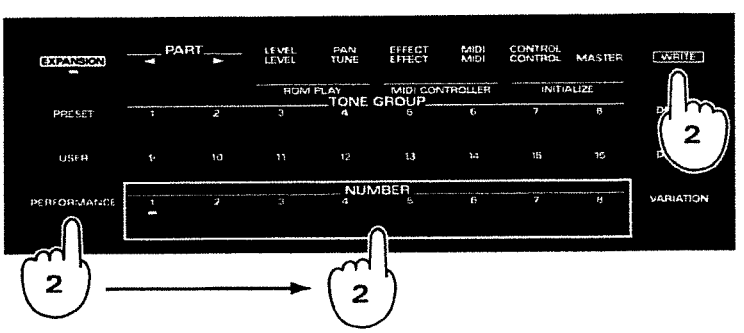
Performances can be useful as well when you using a sequencer or a computer to create music data. By setting up a particular Performance that is to be used with the music, you can be assured that your songs will sound the same way when they are played back later. For details, refer to "Getting More Out of Your Instrument" (☛ p.46).

Selecting Performances



1 Press a NUMBER 1—8 while you hold down PERFORMANCE.
The JV-50/35 will be set to comply with all settings contained in the selected Performance.

Storing Performances



1 Make all the settings for the JV-50/35 that are to be stored in the Performance.

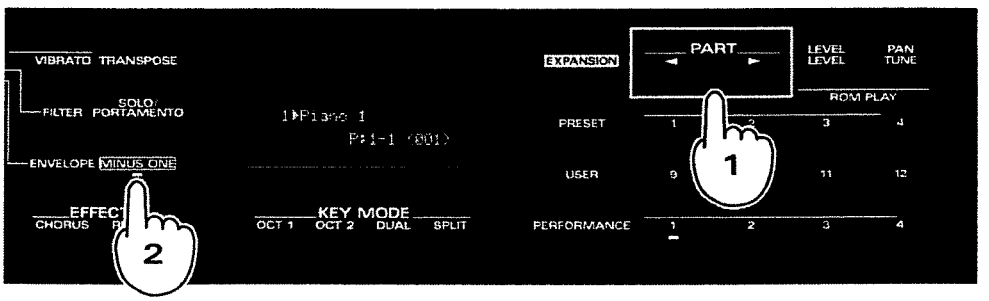
2 While holding down WRITE, press PERFORMANCE. Then, while still holding down WRITE, press NUMBER 1—8, whichever one is to be the destination for the Performance.

** If you release **WRITE** before pressing a **NUMBER 1—8**, you are returned to the previous screen, and no data is stored.*
** Care should be taken when storing Performances, since any previous settings will be erased.*

Lessons Using Music Data

An increasing amount of commercially available music data for computers and sequencers is designed to be used for instructional purposes, and comes with sheet music included.
You can use such data quite effectively for practice thanks to the JV-50/35's Minus-One feature.
By using the Minus-One feature, you can mute what would normally be played by a certain Part in the performance data (either that arriving at MIDI IN, or that which is played by the JV-50's SMF Player). That Part can then be heard only if you play it on the keyboard yourself.

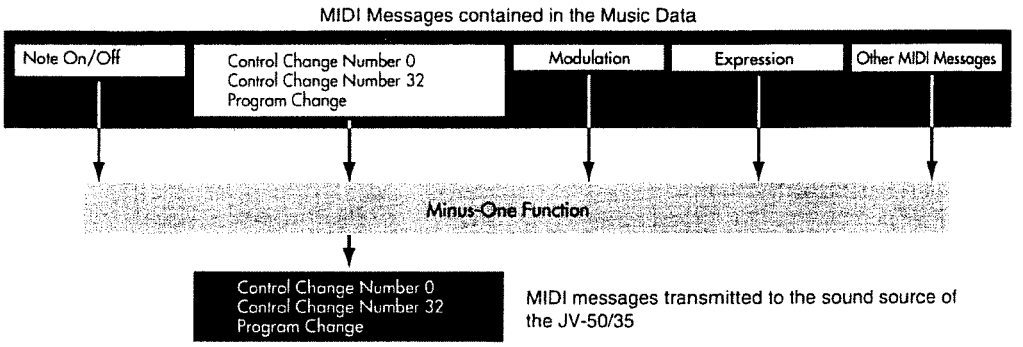
Selecting the Part to Play While Using Minus-One



Select the Part using PART ◀/▶ and press MINUS ONE.
The Part for which the **MINUS ONE** indicator is lit can thereafter only be heard if you play it on the keyboard. Performance data for that Part arriving at MIDI IN, or sent by the JV-50's SMF Player will be ignored. Only one Part can be selected for use with Minus-One.

○ Notes when using the Minus-One function

When the Minus-One function is being used, the JV-50/35 cannot be played with the MIDI messages sent from the MIDI IN or SMF player. This, however, does not mean that MIDI messages are refused. Even when the Minus-One function is being used, the JV-50/35 receives MIDI messages for sound selection. If the music data being played contains sound selection messages, sounds on the JV-50/35 will be automatically changed in accordance with the messages.



If you select a different sound using the buttons on the panel during Minus-One performance, sounds will change one the JV-50/35. Always, the later received sound selection messages have the priority; either of the sound messages included in the music data or the messages created by operating the buttons on the panel.

If you set several Parts to the same MIDI receive channel and select one of the Parts, all these Parts can be simultaneously played from the keyboard. If you play Minus-One performance in such a condition, the Parts which are set to the same MIDI receive channel will not be played with the performance information sent from the MIDI IN or SMF player. Even so, however, sound selection messages will be received and therefore automatically cahnge the sounds in each Part.

Sound Selection Messages

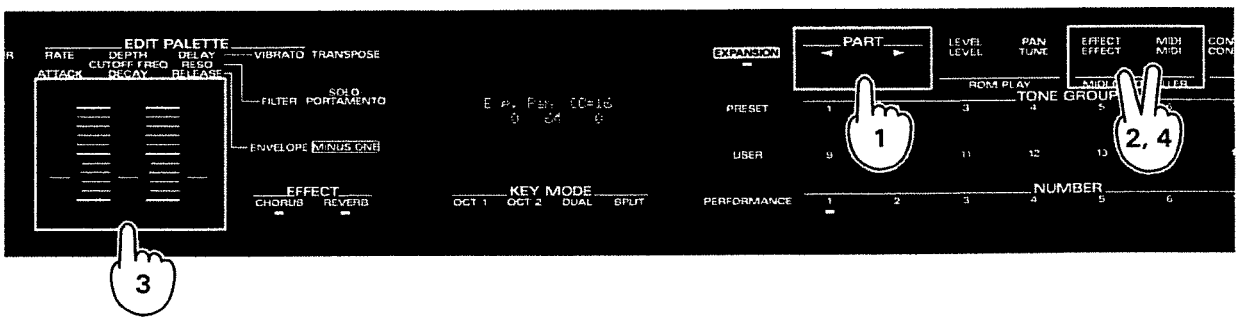
When you select a new Tone or Drum Set, the MIDI OUT sends the messages the conveys "A new sound has been selected". Normally, 128 different sounds are optional using Program Change messages. The JV-50/30 itself contains more than 128 sounds, and more, by connecting the Voices Expansion Board to it, more sounds are avilable. To be able to use all these sounds, it features Bank Select Messages (Control Change Number 0, 32). For a detailed explanation, refer to "Using MIDI to Select Sounds on the JV-50/35" (☛ p.55)

Obtaining Real-Time Control Over an External Device

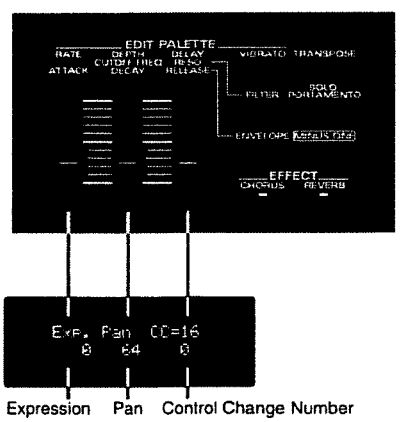
Using the JV-50/35's Edit Palette Sliders, you can control the parameters on an external device in real time. This is called the MIDI Controller feature. It allows you to use the sliders to add extra expression during playback/recording of song data created on a sequencer.
By using the MIDI Controller feature, you can apply continuing alterations in the volume of Parts to add excitement, pan the sound this way and that, or make many other creative modifications in parameter values. The sliders thus make easy the recording of many operations which would take much longer using conventional methods.

Perform the following to use the MIDI Controller features.

Procedure



1. **Select the Part for which you wish to alter the volume and pan using PART ◀/▶.**
2. **Press EFFECT+MIDI.**
3. **Have the sequencer ready to record, then move the sliders to change the volume, or pan the sound while recording.**
4. **To return to where you were originally, press EFFECT+MIDI again.**



Parameters are assigned to the three sliders as shown left. The Control Number determines what is to be assigned, and is set using **VALUE ▲/▼**. For details, refer to the "MIDI Implementation."
The permissible range for each parameter is as shown below:

Expression:	0—127
Pan:	0—127 (L63-R63)
Value for the indicated Control Change Number:	0—127

* *The Control Numbers which can be specified are: 0—9, 12—31, and 64—95.*

Getting More Out of Your Instrument

The JV-50/35 is a multi-timbral synthesizer. This means that it can play a multiple number of instrument sounds at the same time. The following provides information which can be helpful in making the most of the unit's capabilities.

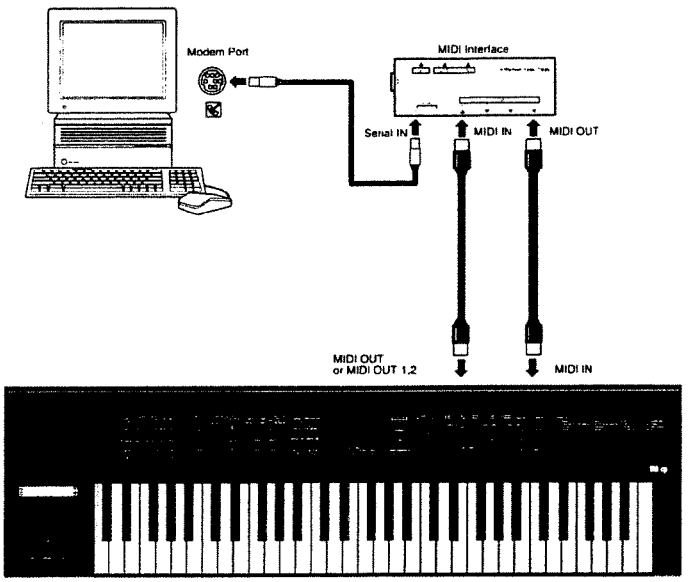
■ When Using Desktop Music Systems

The JV-50/35 provides for the use of 16 Parts. Parts are comparable to the individual players that make up an orchestra or band. Each Part can use a different sound to produce an individual musical part. Effects can also be applied individually for each Part.
In order to perform ensembles that use numerous Parts, you will also need to have a sequencer, or a computer and sequencer software.
The following explains the settings you will need to make when using the JV-50/35 as part of a computerized Desktop Music System (DTMS).

Making the Connections

Make the connections between the JV-50/35 and your computer/sequencer as shown below.

For example: JV-50/35 with Apple Macintosh Series



● About Local Control

If you have your equipment connected as shown in "Making the Connections" above, you will need to set Local Control on the JV-50/35 to OFF, and Soft Thru on the sequencer software to ON. Otherwise, you could experience problems such as notes being sounded twice every time a key is pressed; or they may not sound at all.

Following the instructions in "Local Control (☛ p.36)" set Local Control on the JV-50/35 to OFF.

Refer to the owner's manual for your sequencing software or sequencer for information on the Soft Thru feature.

● About the Settings for Each Part

In order to be able to play a multiple number of sounds simultaneously, you need to select the sound that will be used by each Part, and make settings for the MIDI transmission/reception channels.
Here, let's try changing the JV-50/35's settings to those shown below.

Part	Name of Sound Used	Tone Number	MIDI Transmit Channel	MIDI Receive Channel
Part 1	Piano 1	P: 1-1	1	1
Part 2	Acoustic Bs.	P: 5-1	2	2
Part 3	Jazz Gt	P: 4-3	3	3
Part 4	Alto Sax	P: 9-2	4	4
Part 5	Trumpet	P: 8-1	5	5
Part 6	Nylon-str.Gt	P: 4-1	6	6
Part 7	Pan Flute	P: 10-4	7	7
Part 8	E.Piano 1	P: 1-5	8	8
Part 9	MutedTrumpet	P: 8-4	9	9
Part 10	BRUSH	P: D-7	10	10
Part 11	Vibraphone	P: 2-4	11	11
Part 12	Flute	P: 10-2	12	12
Part 13	Organ3	P: 3-3	13	13
Part 14	Strings	P: 7-1	14	14
Part 15	Trombone	P: 8-2	15	15
Part 16	Tenor Sax	P: 9-3	16	16

Setting the Sound Used For Each Part

(1) Using PART ◀ / ▶, select a Part. Then using the Tone selection buttons, select the desired Tone for that Part.
Repeat this procedure to select the Tones for Parts 1—9.

(2) Using PART ◀ / ▶, select Part 10. Then after pressing DRUM1, press NUMBER 1—8 to select the desired Drum Set.

(3) Repeat the procedure in (1) to select the Tones for Parts 11 — 16.

Setting the MIDI Receive Channel for Each Part

(1) Check that the indicator on MASTER is dark, then press MIDI and confirm that "Rx Channel:" has appeared in the display.
When the indicator on **MASTER** is lit, press **MASTER** to turn it off. Also, if "Rx Channel:" has not appeared in the display, use **PARAMETER ▲ / ▼** to switch the display.

(2) Select the MIDI channel using the VALUE/VALUE slider.

Setting the MIDI Transmit Channel for Each Part

(1) Check that the indicator on MASTER is lit, then press MIDI and confirm that "Tx Channel:" has appeared in the display.
If "Tx Channel:" has not appeared in the display, use the **PARAMETER** to switch the display.

(2) Select "Part" using the VALUE/VALUE slider.
When set to "Part," the MIDI Transmit Channel will be the same as the MIDI Receive Channel for Parts.

● Recording What You Play

Use the metronome feature provided by the sequencer or software application to have a 'click' sound played. Then while listening to it,
play each Part on the keyboard.
It is probably best to record the Drum Part first, then while listening to it, add the remaining Parts one by one.
If you find it difficult to record drums playing on the keyboard, you could use step input on the sequencer to create the data for the Drum Part. Or you could play the percussion part using a separate rhythm machine (Roland R-70/DR-660, etc.).
If you set the Key Mode to SPLIT, you can record what you play using two Parts at the same time. In addition, you may want to use the BENDER/MODULATION lever (or other controls) during recording, since such data will also be included in the recording.

● Saving the Settings Used While Recording

Once you have finished recording the whole piece, try listening to the playback. While listening, try selecting other Tones, and adjusting the balance by changing Level or Pan settings. As finishing touches, adjust Chorus and Reverb to achieve just the sound you want.
After putting all that effort into making the proper settings, you'll probably want to store them in memory. That's why the JV-50/35 provides Performances, so you can save up to 8 sets of settings that can be conveniently recalled whenever you need them. Once stored as a Performance, you can simply select that Performance before beginning to play, and then start playing while knowing you have the instrument set to the best possible settings.

○ Recording the JV-50/35's Settings at the Top of Song Data

You can easily have the JV-50/35's settings be automatically placed at whatever you feel is most appropriate for a particular song if you record the collection of settings beforehand at the top of your song. The following four methods are available for transferring data for the JV-50/35's settings.

1. Recording data that was bulk-dumped

First, use an external sequencer to record bulk data (data that has been bulk-dumped, refer to p.52). You can then go on and record the performance, starting from the following measure. Afterwards, when you play back this song data, the JV-50/35 will instantly be set to all the settings that were recorded as soon as it receives the bulk data, and you obtain all the desired performance features.

2. Recording data for the Performance

First, set the JV-50/35 to all the settings you want to have in effect when you play the song. Then, save these settings as a Performance.

When recording, first of all record the settings for the Performance at the top of the song. To record the settings for a Performance, put your sequencer into the recording mode. Then press the button for the Performance, and the settings for it will be sent from MIDI OUT to the sequencer and recorded. Note that you will need to have the Performance Dump Transmission switch set at "ON" (☛ p.37).

3. Recording GM Setup data

When you are creating song data intended to be played on a GM sound generator, it is a good idea to insert GM Setup data in the first measure of the song. For information on what kind of data is transmitted when you do this, see "Send GM Setup" (☛ p. 38).

4. Recording GS Setup data

If you are creating song data that normally will be played on a GS sound generator, it is a good idea to insert GS Setup data in the first measure of the song. For information on what kind of data is transmitted when you do this, see "Send GS Setup" (☛ p.38).

* *If you are creating songs for a computer or MIDI sequencer, we recommend that you use one of the methods explained above to record the JV-50/35's settings along with the song. If you intend to use your computer or MIDI sequencer to produce data for manipulating the JV-50/35's settings (rather than first having it transmitted from the JV-50/35 itself), you will need to remember to insert a sufficient amount of pause between each item of MIDI data in order to assure that you successfully obtain all the desired settings when the data is played back.*

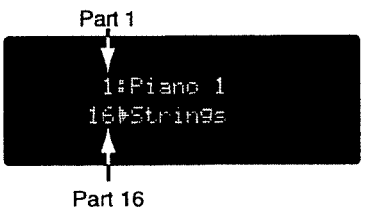
  Make sure to adjust the tempo when both recording and playing back your song data, regardless of which of the above four methods you may have used to record the unit's settings. Otherwise, you cannot be certain of obtaining the conditions you expect for the JV-50/35.

■ Playing Live

When playing for an audience, many musicians tend to stay with a single Part, and change the Tones for it as they go along. It is easy to get the impression that they are not really taking advantage of their synthesizer's multi-timbral capabilities. You may want to try getting more out of your instrument by using some of the features described below.

● Are You Using a Key Mode?

During live performances the use of Key Modes can be quite effective.
The JV-50/35 provides four key modes. Of these, DUAL and SPLIT use two Parts at once. When you are using one of these Key Modes, the following will be shown in the display so you know that you are using two Parts at the same time.



● Changing Tones Quickly

In preparing for a stage performance, you may want to assign the Tones that you expect to use to the Parts in numerical order. Then while playing you can instantaneously switch to the next Tone you need simply by changing to the next Part.

For example, your plans might call for the following Tone changes:

Organ 1 → Synth Brass 3 → 60s E. Piano → Fantasia ~

To select Tones on the JV-50/35, you need to use the **PRESET/USER, TONE GROUP 1—16, NUMBER 1—8**, and **VARIATION** buttons. So, in order to select the Tones above, you would need to press this combination of buttons:

Tone	**Organ 1 →**	**Synth Brass 3 →**	**60s E. Piano →**	**Fantasia ~**
Button	**PRESET** **TONE GROUP 3** **NUMBER 1**	**TONE GROUP 8** **NUMBER 7** **VARIATION**	**TONE GROUP 1** **NUMBER 5** **VARIATION x 3**	**TONE GROUP 12** **NUMBER 1**

Since this involves pressing a lot of buttons, you cannot expect to be able to make rapid Tone changes this way.

But if you assign the Tones to Parts like this...

Part 1	Part 2	Part 3	Part 4
Organ 1	Synth Brass 3	60s E. Piano	Fantasia

...you will not need to be bothered with pressing buttons, since you can select the Tones simply by selecting Parts 1—4. These settings can also then be stored as a Performance, and used as one of the Tone setups that you need for your repertoire.

■ About Maximum Polyphony and Part Priority

Concerning Maximum Polyphony

The JV-50/35 is capable of producing 28 voices simultaneously. However, if all the Tones you are using are composed of 2 voices each, this maximum number of voices is reduced to 14. Also, if using a Key Mode, the maximum number of simultaneous voices will change, since two Tones are played together. For information on the number of voices used by every Tone, refer to the "Tone Chart" (☛ p. 92).

Concerning Part Priority Ordering

When the number of voices being sounded exceeds 28, priority is given to producing the most recent sounds. Those that have already been sounding for a while will be cut, in order, beginning with those that have been sounding the longest. Additionally, the
JV-50/35 follows a priority ordering system which governs the sounding of Parts. Parts that have been given lesser priority will be the ones that have to stop producing sound first. For this reason, you should take a Part's order of priority into consideration when assigning it for use in songs.

Note Sounding Priority Order	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Part Number	10	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16

When you have Parts that definitely must be sounded, use the Voice Reserve function (☛ p. 41) to reserve the necessary number of voices for them.

Restoring the Original Settings

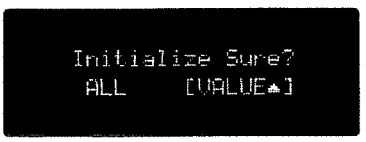
JV-50/35 allows you to make wide-ranging changes in settings, and creatively edit sounds. However, if needed, you can always return to
the original settings the unit had when it was new. The following 3 choices for this are available:

Procedure

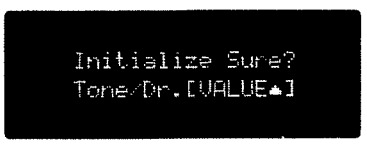
(1) Press CONTROL + MASTER.

(2) Select the type of original settings using PARAMETER ▲/▼.

1. Have all the unit's settings be restored to the factory preset settings.



2. Restore the factory preset settings for all the User Tones and User Drum Sets.



3. Set the unit to the fundamental settings for the GS Format.

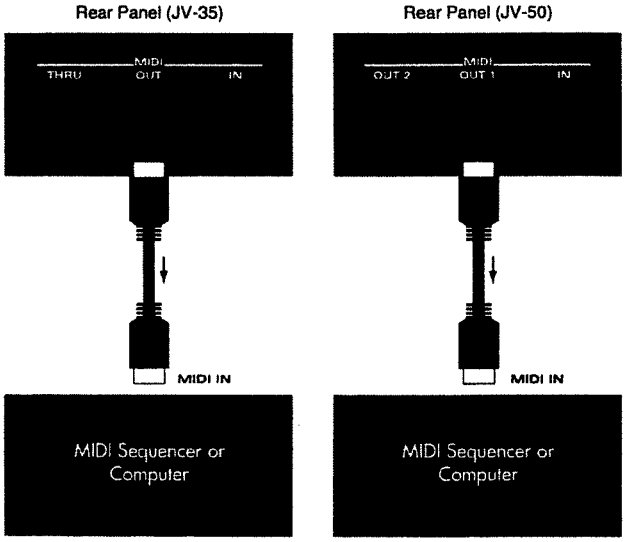
(3) Press VALUE ▲ and the original settings will be restored.
To cancel the procedure, press **VALUE ▼**.

Saving the JV-50/35's Data

The JV-50/35's data can be saved in the form of Exclusive data onto an external MIDI device. To save data in this manner, you need to perform what is referred to as the "Bulk Dump" procedure.
The following explains the different types of Bulk Dump available, and how they are performed.

Making the Connections

In order to perform a bulk dump and save data on another unit, the JV-50/35 needs to be connected with an external MIDI device, either a sequencer or other type of unit. MIDI cables should be connected as illustrated below.



* *By connecting a second JV-50/35 instead of a sequencer, both instruments can easily be set to exactly the same settings.*
* *Make sure to use MIDI OUT 1 when you want to bulk dump the JV-50's data to an external device. Note that on the JV-50, the SMF player can be used to store data that has been bulk dumped. When you later have the SMF player play back such data, it will be sent out from MIDI OUT 2.*

Types of Bulk Dump

The following types of bulk dump are available.

- **Bulk Dump**
  Transmits all of the JV-50/35's settings.

- **Tone Dump**
  Transmits settings for the 256 User Tones.

- **Drum Dump**
  Transmits settings for the User Drum Sets.

- **Bulk Dump (Part)**
  Transmits settings for each Part on an individual Part basis.

How To Perform Bulk Dumps

1. Bulk Dump, Tone Dump, Drum Dump

1. **Press MASTER and confirm that its indicator is lit.**
2. **Press MIDI.**
3. **Select the parameter that you want to transmit using PARAMETER ▲/▼.**
4. **Press WRITE, and the data for the JV-50/35 is transmitted.**
   When the transmission is complete, the word "Completed" is shown in the display for about a second.
   To cancel (and not transmit any data), press **MIDI**.

2. Bulk Dump (Part)

1. **Press MASTER and confirm that its indicator is dark.**
2. **Press MIDI.**
3. **Select Bulk Dump (Part) using PARAMETER ▲/▼.**
4. **Select the Part to be dumped using PART ◀/▶.**
5. **Press WRITE, and the data for the Part is transmitted.**
   When the transmission is complete, the word "Completed" is shown in the display for about a second.
   To cancel (and not transmit any data), press **MIDI**.

■ Saving Settings for the JV-50's Sound Generator

Carry out the steps below to internally record all the settings for the JV-50's sound generator as bulk data, then save it on floppy disk.

* *The settings for the sound generator on an expansion board, and the settings for Drum Sets for any sound generator (including the main onboard one) cannot be recorded in this manner.*

Carrying Out the Recording

1. **Insert a disk.**
2. **Press REC + FWD.**
3. **Press either PLAY or PAUSE and recording will start.**
   (To halt the recording, press STOP.)
   A name such as "Song_00000" will be supplied for the bulk data that was recorded.

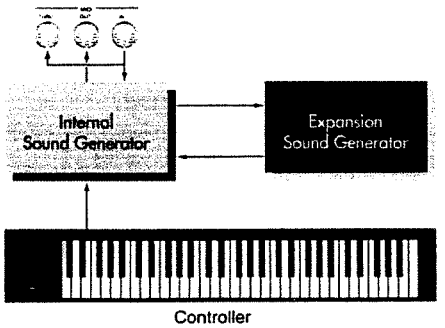
   * *When you want to record bulk data arriving from an external unit, you should record it using the ordinary recording procedures (☛ p. 66).*

About the MIDI Connectors on the JV-50/35

On the rear panel of the JV-50/35 you will find three MIDI connectors. Their names and the way they function will be somewhat different depending on whether you own the JV-50 or JV-35. The following explains how the MIDI connectors function.

● How the JV-35's MIDI Connectors are Configured

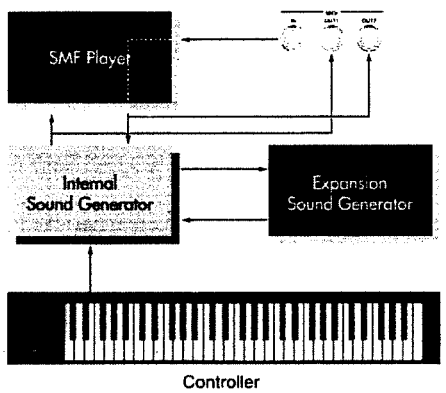
The following three MIDI Connectors are provided on the rear panel of the JV-35.



MIDI IN: Receives any data arriving from an external MIDI device.
MIDI OUT: Transmits to external MIDI devices the data for everything that has been played on the JV-35, as well as data describing operations carried out using the panel.
MIDI THRU: Continually passes on an exact copy of all data received at MIDI IN.

● How the JV-50's MIDI Connectors are Configured

The following three MIDI Connectors are provided on the rear panel of the JV-50.



MIDI IN: Receives any data arriving from an external MIDI device.
MIDI OUT 1: Transmits the data for everything that has been played using the keyboard and damper pedals. In addition, data describing changes in the sound used (Program Change and Control Change messages) will be transmitted as well.
MIDI OUT 2: Sends out all data received at MIDI IN, along with all data produced by the SMF player.

Using MIDI to Select Sounds on the JV-50/35

By using the JV-50/35's MIDI features, you can use the keyboard panel to change to different sounds on an external MIDI device; or alternately, use an external device to select the sounds used by the JV-50/35.

■ Tone Change Data Transmitted When Buttons Are Pressed

When you use the JV-50/35's panel to change to a different Tone, data identifying this newly selected Tone (its corresponding Program Change and Control Change message combination) will be transmitted from MIDI OUT. The details of, and order followed when sending such Tone change data are as follows:

Control Change Number 0 (BnH 00H mmH)
Control Change Number 32 (BnH 20H llH)
Program Change Number (CnH ppH)

n: MIDI Channel
mm: MSB
ll: LSB
pp: Program Change Number

● MIDI Data Transmitted When Tones/Drum Sets Are Selected on theJV-50/35

Type of Tone Selected		MSB/LSB	PC#
Preset Tone	Capital Tone	00H/00H	0—127
	Variation Tone	01H—3FH/00H	0—127
User Tone	User Tone Map 1	40H/00H	0—127
	User Tone Map 2	41H/00H	0—127

Type of Rhythm Set Selected		MSB/LSB	PC#
Preset	Standard Set	00H/00H	0
	Room Set	00H/00H	8
	Power Set	00H/00H	16
	Electronic Set	00H/00H	24
	TR-808 Set	00H/00H	25
	Jazz Set	00H/00H	32
	Brush Set	00H/00H	40
	Orchestra Set	00H/00H	48
	SFX Set	00H/00H	56
User	User Set 1	40H/00H	0
	User Set 2	40H/00H	8
	User Set 3	40H/00H	16
	User Set 4	40H/00H	24
	User Set 5	40H/00H	25
	User Set 6	40H/00H	32
	User Set 7	40H/00H	40
	User Set 8	40H/00H	48
	User Set 9	40H/00H	56

PC#: Program Change Number

** The user bank (40H/xxH, 41H/xxH) messages are transmitted when the user bank select Tx switch sets on.*

● MIDI Data Transmitted When Tones/Drum Sets Are Selected on the VE-JV1

Type of Tone Selected		MSB/LSB	PC#
Preset Tone	P1	51H/00H	0—127
	P2	51H/01H	0—127
	P3	51H/02H	0—127
	P4	51H/03H	0—127
User Tone	U1	42H/00H	0—127
	U2	42H/01H	0—127

Type of Rhythm Set Selected		MSB/LSB	PC#
Preset	P: D-1	51H/00H	0
	P: D-2	51H/00H	64
	P: D-3	51H/01H	0
	P: D-4	51H/01H	64
	P: D-5	51H/02H	0
	P: D-6	51H/02H	64
	P: D-7	51H/03H	0
	P: D-8	51H/03H	64
User	U: D-1	42H/00H	0
	U: D-2	42H/00H	64
	U: D-3	42H/01H	0
	U: D-4	42H/01H	64
	U: D-5	42H/02H	0
	U: D-6	42H/02H	64
	U: D-7	42H/03H	0
	U: D-8	42H/03H	64

PC#: Program Change Number

* *The user bank (40H/xxH, 41H/xxH) messages are transmitted when the user bank select Tx switch sets on.*

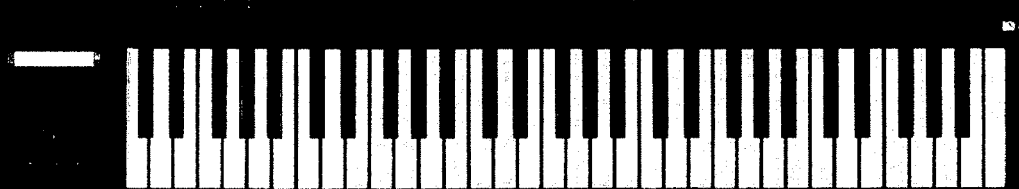
* *Wherever "H" appears in the above charts (such as "00H' or "40H"), this indicates that the number shown is in hexadecimal. Note also that even though the unit processes Tone numbers using the hexadecimal numbers 00H through 7FH (decimal 0-127), its display shows these in terms of the numbers 1 through 128.*

● Using an External MIDI Device to Select Tones on the JV-50/35

When the unit receives messages calling for a change to a different Tone (either arriving at MIDI IN, or sent out by the SMF player), the JV-50/35 (or VE-JV1) will comply by changing to the requested Tone. In order to assure you always obtain the intended sound change, you will need to make certain you are using the correct MIDI messages and are having them sent in the proper order.

About The SMF Player

The JV-50 features an SMF player that allows you to play back standard MIDI type music data on the market or record the performance played on the keyboard.



Disk Playback

■ Description about the Display

The JV-50's display normally shows the values set on the sound module, such as the Part that can be played by the keyboard or the number of sounds currently used.
If you wish to cause the display to show the values set on the SMF player, do as follows:

6 Press DISPLAY and make sure that the indicator is lit.

When the indicator of this button is lit, the Display shows the values set on the SMF player. When the indicator is dark, the Display shows the values set on the sound module.

■ Supplied Disk

The disk supplied with the JV-50 contains as many as eight demonstration songs.

No.	Song Name		
1	Wackyland (Intro)	Marvin Sanders	© 1993 Marvster Music
2	BOMB!!	Junichi Kawaguchi	© 1993 Roland Corporation
3	Watchers	Mitsuru Sakaue	© 1993 Roland Corporation
4	Mechano Brew	Wono Satoru	© 1993 Roland Corporation
5	Loop de Ville	Adrian Scott	© 1993 Adrian Scott
6	YEBISU	Shigekaz Nakamura	© 1993 Roland Corporation
7	Nostalgic Heaven	Kakumi Nishigomi	© 1993 Roland Corporation
8	Wackyland (Complete version)	Marvin Sanders	© 1993 Marvster Music

The Profiles of the Composers

Junichi Kawaguchi
Junichi Kawaguchi is an arranger/composer/keyboardist who is currently involved mainly with studio recording. He has produced compositions and arrangements for quite a few well-known artists. Within Japan, he has also played an important role during numerous demonstrations, including those for Roland's S and JV series, at musical instrument fairs and other special events.

Satoru Wono
While studying at the Tokyo Gakugei University, where he gained his Bachelor of Music Degree and M.E., he worked as a composer and performer. A modern composition, "The Machine of The Bachelor", received Best New Composer Award from the Japanese Society of Contemporary Music in 1988. He is also very active as a producer of House music and is a composer of video and TV music.

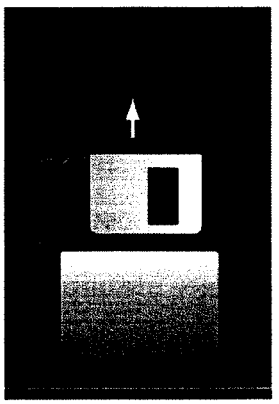
Adrian Scott
Adrian Scott formerly handled the vocals and keyboards for the popular Australian group, "Air Supply". Since following the solo path, he won the Silver Prize at the "World Song Festival Tokyo '84". Currently, he is involved as a producer of commercial music and music for films. In addition, as a session player, he has performed along with a number of Australia's top musicians, including John Farnham and Kylie Minogue. He lives in Melbourne, Australia.

Shigekaz Nakamura
Shigekaz is a member of Roland's engineering team. While the brunt of his time has had to be devoted toward development of the company's sound generating hardware, he has also found time to create a significant amount of sound data and numerous demo songs (for the U-20, D70, JV-80 and JD-990, among others.)

Kakumi Nishigomi
He was born in 1961 in Kochi prefecture, Japan. In his very first stint as a producer, he worked with Eillen Fawreen to produce "Body & Voice." From 1988, he has played bass with the Hisaaki Kanzaki Session. In addition, he served as co-producer for "Miracle of Love" by Takaaki Yasuoka in 1988, and again in 1990 for "NEVER" by All Ways. In 1992 he formed GUY'NA MUSIC, together with Hisaaki Kanzaki. Since then he has produced a number of events and concerts, including "We are Party" the "Asian Soul Brothers" concert, "Rutsubo of Music" with Zenjiro, and Hisaaki Kanzaki's "Sunday for Santa Claus." He is currently serving as president and chief producer of the GUY'NA MUSIC company, while also performing regularly as a bassist.

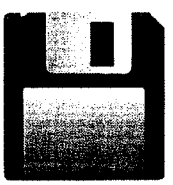
Marvin Sanders
Marvin Sanders is a somewhat wacky Los Angeles composer whose work can be heard on projects for Toyota, Acura, Max Factor, Alpine, Thomas Brothers, Theater for Young Audiences, and Michael Jackson. He has also worked extensively with Roland, conducting clinics and writing music for numerous product videos and demos including ROM-plays in the SC-155 and JV-880.

■ Playback

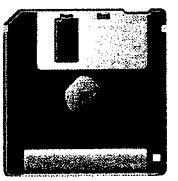


The JV-50 contains 8 demonstration songs. The following explains how to playback the disk.

First of all, insert the disk to the disk slot as shown left. Be sure that the right side is facing upward.

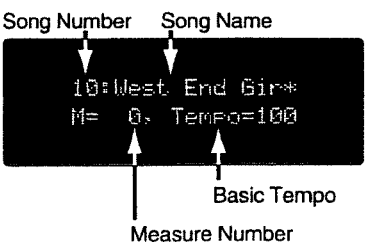


Front



Rear

When you insert the disk to the slot, the display responds with:



● Start Playback

Press PLAY.

Play starts from the beginning of the song which is selected. When **PAUSE** is pressed, playback starts from the stopped position.

** To play from the start of a song, press **PLAY** while holding down **STOP**, and a blank bar (one bar) will be inserted.*

● To stop playback

Press STOP.

When you press **STOP**, the song position will automatically return to the beginning of the song. You can listen to the song from the beginning by pressing **PLAY**. When you press **BWD (FWD)** while holding **STOP**, the position will move to the beginning (end) of the song.

** If you want to stop at a certain point without returning to the beginning, turn off "Auto Rewind function". (☛ P.69)*

● Pause

Press PAUSE.

Playback will stop. To resume playing, press either **PLAY** or **PAUSE**, and playback will resume from the pause point.

● Forward

Press and hold FWD.

While this button is pressed, the song position will advance rapidly.
When you press **BWD** while holding **FWD**, the position will more rapidly advance.

** You can use this Fast Forward function during STOP, PAUSE, or PLAY.*
** Forward may take time when moving to a bar that is located further away.*

● Backward

Press and hold BWD.
While this button is pressed, the song position will backward rapidly. When you press **FWD** while holding **BWD**, the position will more rapidly backward.

* *You can use this Rewind function during STOP, PAUSE, or PLAY.*
* *Rewinding may take time when moving to a bar that is located further away.*

● To adjust the tempo of the current song

Adjust the tempo by pressing the TEMPO ◀/▶ buttons.
While adjusting the tempo, the tempo will be shown in the display. (The tempo range is ♩= 5—260 beats per minute.)
When you press **TEMPO ▶** (**◀**) while holding **TEMPO ◀** (**▶**), the setting value of the tempo will rapidly increase (decrease).
When you press **TEMPO ▶** (**◀**) while holding **CLEAR**, the tempo will return to the reference value.

● All Tempo Shift

The All Tempo Shift function allows you to change-by a set percentage-the playback tempo of all songs on a disk. So, for example, if you set a 10% increase for the second song on your disk, all the songs on that disk will playback with a 10% increase in tempo.

* *Note that, although the unit calculates increases or decreases in tempo as a percentage, the display actually indicates change as beats per minute. For example, if song 2 was originally recorded at 100 bpm, and you increase the playback tempo by 10 bpm (to 110), that represents an increase of 10 %. If song 3 was originally recorded at 200 bpm, it will playback at 220 bpm (also an increase of 10%).*

Press and hold SET and the press PAUSE.
A number which indicates a Song Interval Time will appear in the display. (☛ P.69)

Press TEMPO ▶ to turn the All Tempo Shift function ON.
The letter " * " will appear on the right of the display `Set Interval=`.
To turn the All Tempo Shift function OFF, press **TEMPO ◀**.

Press SET.

Use TEMPO ◀ or TEMPO ▶ to decrease or increase the tempo as desired.

● Selecting a song

Select a song by pressing the SONG ◀/▶ buttons.
The song number will be shown in the display.
When you press **◀** (**▶**) while holding **▶** (**◀**), the song numbers will rapidly increase (decrease).

* *You can select a song during STOP, PAUSE or PLAY. If you select a song while a song is currently playing, the selected song will start playing.*
* *Note that certain kinds of song data that you might play could result in wide-ranging changes being placed in effect on your JV-50. As a result, you may find that you get some unexpected sound if you play the keyboard, or no sound at all.*
Should you get into this situation, you can fix it either by restoring all the basic settings for the GS Format (☛ p.51), or by selecting a performance appropriate for the music you want to play.

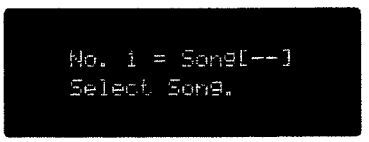
■ Program Playback

"Program Playback" makes two or more songs automatically playback in the order you specify.

● Program settings

① While holding SET, press PROGRAM.
The button indicator will blink, indicating that you can now make settings.

② Use SONG ◀ /▶ to select the song you want the JV-50 to play first.



③ Press SET to store the song you selected.

④ Repeat steps ② and ③ to specify the order of the songs.

⑤ When you finish setting the song order, press STOP (or PLAY).
The **PROGRAM** indicator will light to show that you are now in the Program Playback mode.

* *You can specify a program of up to 99 songs.*
* *The song order you have set will be canceled after you turn the power off.*
* *f you don't cancel an old program, newly programmed songs will be added at the end of the old program. If you don't want this to happen, be sure to cancel the old program.*

● Program playback

① While the PROGRAM indicator light is on, press PLAY.
Program playback will begin, and will stop when the JV-50 has finished playing all the songs you programmed.

* *To return to regular playback mode, press **PROGRAM** and the indicator will go out.*
* *If you press **PROGRAM** during regular playback, programmed playback will begin when the song currently playing finishes.*
* *If you insert a disk which is different from the disk for which you created the program, program playback will not function.*

● To cancel program settings

① When the PROGRAM indicator is on, press and hold CLEAR.
While continuing to press **CLEAR**, press **PROGRAM**. The **PROGRAM** indicator will go out and the program will be canceled.

Playing Individual Songs (Single Playback)

Single Playback will stop at the end of each song.

● Single playback

❶ Press SINGLE. The indicator will light. Then press PLAY.
Single playback will begin and will stop when it reaches the end of the song.

To return to regular playback, press **SINGLE. The indicator will go out.*

● Single play mode

In the single play mode, the method of starting playback can be set.

❶ While holding SET, press SINGLE.

❷ Select increment (Inc) or repeat (Rep) with BWD/FWD

Inc: The playback will start at the beginning of the next song when you press **PLAY** after the SINGLE PLAYBACK is completed.
Rep: The playback will start at the beginning of the currently selected song when you press **PLAY** after the SINGLE PLAYBACK is completed.

❸ Press SET to complete the setting.

Playing Songs Many Times (Repeat Playback)

Repeat Playback will repeatedly playback songs.

● Repeat playback

❶ Press REPEAT. The indicator will light. Then press PLAY.
Repeat performance will begin and will continue until you press **STOP** or **PAUSE**.

** To return to regular playback, press REPEAT. The indicator will go out.*

<How playback functions can be combined in various ways>

Single playback	Repeat	Programmed	
on	off	on	Playback will stop at the end of each song. After stopping, the song which is next in the program order will begin playing. (During single play mode: inc)
on	off	off	Playback will stop at the end of each song.
off	on	on	The program will be repeated.
off	on	off	All songs on the disk will repeat until you stop playback.
on	on	on or off	The currently selected song will repeat continuously.

** If a Repeat region is already set for the song you have selected, you will obtain "Block Repeat" playback.*

■ Repeating a Specified Section (Block) of a Song (Block Repeat Playback)

"Block Repeat" playback makes a specified section of a song repeat. (This is valid only in Single Playback mode.) It is sometimes convenient to use this function to repeat a certain phrase over and over when practicing.

● Setting and using Block Repeat (during playback)

❶ Press SINGLE to enter the Single playback mode (the button indicator will light).

❷ While holding SET, press REPEAT.
The button indicator will begin blinking. Now you can specify the area for Block Repeat.

❸ Press PLAY to begin playback.

❹ At the beginning of the section (block) you want to repeat, press SET.
The button indicator will blink faster.

❺ At the end of the section (block) you want to repeat, press SET again.
The indicator will light continuously, and the Measure Number will blink for a moment. Block Repeat playback will begin when the Measure Number lights continuously.

❻ To stop Block Repeat playback, press STOP (or PAUSE).

** You can also specify a Block Repeat after a song is already playing. Simply skip Step 3 above.*
** To return to regular playback, press **REPEAT** and **SINGLE**. The indicators will go out.*
** The time it takes for the JV-50 to return to the starting point of a repeat section will depend on the song data.*
** When you reset a repeat block, previous settings are erased.*

● How to cancel Block Repeat settings

❶ While holding CLEAR, press REPEAT.
The button indicator will go out and the Block Repeat setting will be canceled.

● Setting and using Block Repeat (while stopped or paused)

① Press SINGLE to enter the Single performance mode (the button indicator will light).

② While holding SET, press REPEAT.
The button indicator will begin blinking. Now you can specify the area for Block Repeat.

③ Use the FWD and BWD buttons to move to the first bar of the section you want to repeat. When the Measure Number lights continuously, press SET.
The button indicator will blink faster.

④ Use the FWD and BWD buttons to move to the last bar of the section you want to repeat.
When the Measure Number lights continuously, press **SET**.
The indicator will light continuously, and the Measure Number will blink for a moment. The Repeat section can be set when the Measure Number lights continuously.

⑤ Press PLAY to begin Block Repeat playback.

⑥ To stop Block Repeat playback, press STOP (or PAUSE).

* *To return to regular playback, press **REPEAT** and **SINGLE**. The indicators will go out.*
* *The time it takes for the JV-50 to return to the starting point of a repeat block will depend on the song data.*
* *When you reset a repeat block, previous settings are erased.*

● Jumping to the first bar or the last bar in the repeat block

① Each time REPEAT is pressed while holding down STOP, the JV-50 will alternately jump to the repeat start position and return position.

Playing Your Own Song Data

You can play song data that was created on other computers or sequencers, if it is in the standard MIDI file format. Standard MIDI file is a type of data format created so that song data can be compatible with various different devices. This data format can be used for devices of manufacturers from all over the world.

● **For Standard MIDI files created on IBM-PC and Atari computers:**
Save the Standard MIDI file to a disk which has been formatted for the JV-50 (☛ P.66).
The JV-50 may not be able to play disks formatted by your device.
Change the file extension to ".MID" if the extension is not so named.

● **For Standard MIDI files created on a Macintosh computer:**
Save the Standard MIDI file to a disk which has been formatted for the JV-50 (☛ P.66).
The JV-50 may not be able to play disks formatted by your device.
For a Macintosh equipped with an Apple Super Drive, use the "Apple File Exchange" software to save data to disk, converting Standard MIDI files to MS-DOS data. A disk drive such as a "DaynaFile" is necessary for a Macintosh which is not equipped with a Super Drive (SE/II/Plus).
Change the file extension to ".MID" if the extension is not so named.

* *Song data may not be played back correctly depending on the device (or software) that was used for converting to Standard MIDI file format.*

* *The JV-50 numbers song data recorded on a disk using the order of the following characters, numbers and marks (the order of the ASCII characters). If you number the play order at the beginning of the song before hand when playing song data which has been recorded with another sequencer, you can have it correspond with the indicated song number.*

! # $ % & ' ( ) 0 — 9A — Za — z ^ _ { } ···

Recording

Here's how to use a MIDI keyboard to record a musical performance.

■ Before you begin recording

When you record on the JV-50, the recorded data is stored directly onto floppy disk (2DD Type). You therefore must prepare a disk before you begin recording.

● If you are using a new disk

Before the JV-50 can use a newly-purchased disk, the disk must be formatted (initialized) using the following procedure.

1 Set the write protect tab of the disk to the "WRITE" position, and insert it into the JV-50.
Be sure not to insert the disk backwards or upside down.
"Are You Sure?" appears in the display after the disk is inserted.

2 Press REC, and the disk will be formatted.
"Now Working" appears in the display during formatting. "Completed." appears when the format operation has been completed.

** When you format a disk, all data that was on that disk will be lost. Before you format a disk, make sure that it does not contain important data you wish to keep.*

● If you wish to use other types of disks

Before the JV-50 can use a disk formatted by another device (i.e., a device other than an IBM or ATARI computer), the disk must be formatted using the following procedure. This procedure can also be used to erase all songs from a disk.

1 While holding CLEAR, insert the disk (with the protect tab at "WRITE") into the disk drive.
Be sure not to insert the disk backwards or upside down. "Are You Sure?" appears in the display the disk is inserted.

2 Press REC and the disk will be formatted.
"Now Working." appears in the display during formatting. "Completed." appears when the format operation has been completed.

● Selecting the Time Base

Before using the JV-50 to record data that will be played back on a computer or other sequencer, set the Time Base to match that of the device which will be used for playing back the data.
The Time Base (also called "Resolution" on some devices) determines the timing resolution at which data will be recorded. This will be different for each device.
The JV-50 allows you to select a Time Base of 96/120/192/240 when recording. Refer to the chart on the below, and set the Time Base to match that of the other device you will be using. If the Time Base is incorrect, the timing of notes will be incorrect, and the playback will not sound as expected.

Time Base of the JV-50	Time Base of the other device
96, 192	24, 48, 96, 192, 384
120, 240	30, 60, 120, 240, 480

** When shipped, the JV-50 is set to a Time Base of 96.*
** Time Base settings have effect only when recording. When using the JV-50 to playback song data that was recorded on other devices, the required Time Base will automatically be detected, and the Time Base settings have no effect.*
** A song recorded by the JV-50 will be named as "Song_00000" and the file will be named as "_00000.MID", etc.*

1 **While holding SET, press REC.**
The display will show the current Time Base.

2 **Use BWD/FWD to select the Time Base (96/120/192/240).**

3 **Press SET to complete the operation.**

● How to record

1 **Insert a formatted disk into the drive.**

2 **While holding PAUSE, press REC.**
The song number of the song you are about to record will be displayed. The JV-50 will enter the record ready mode.

* *If this is the first song to be recorded on the disk, it will be song number 1. If the disk already contains song data, the newly recorded song will be numbered after the last song. However, if the disk contains song data that was created on another sequencer, the song numbers may be different, depending on the song names.*

3 **Set the play tempo by pressing TEMPO ◀/▶.**

4 **When you begin playing the keyboard, recording will start.**
You can also start recording by pressing **PLAY** (or **PAUSE**).

5 **When you finish your performance, press STOP (or PAUSE).**

* *If you pressed PAUSE, you can press PLAY (or PAUSE) once again to resume recording from the pause point.*

* *Never remove the disk while recording is in progress (while the disk indicator is lighted)!*

● How to re-record (clear song data)

1 **While holding REC, press CLEAR.**
The display will ask "Are You Sure?".

2 **Press REC once again.**
The song you recorded will be cleared (erased). Re-record the song using the procedure above.

* *This operation can be used to clear not only the song you just recorded, but also other songs on the disk. To clear another song, select the song number, and perform the above operation. When you clear a song, the following song numbers will be renumbered.*

■ Recording Song Data from Another Device Into the JV-50

Song data that was created on a computer or other sequencer can be recorded into the JV-50 as explained below. If you wish to play song data that is not in Standard MIDI File format, use this procedure to re-record the data into the JV-50.

* *MIDI Clock (timing information for playback) has been preprogrammed to "INTERNAL" on the JV-50, so that it will be unnecessary to change the settings.*

● Recording

1 While holding PAUSE, press REC.
You will enter the record ready mode.

2 Set the play tempo by pressing TEMPO ◀/▶.

3 Press PLAY (or PAUSE) to begin recording.

4 Start playback on your computer or other sequencer.
The data will be recorded.

5 When recording is complete, press STOP.

* *If you set the JV-50 MIDI Clock parameter to "Remote", the JV-50 will play/stop in response to operation of the other device (computer or sequencer) (☛ P.72).*

* *If the song data contains a large number of System Exclusive messages, they may not be recorded.*

Setting The Playback Functions

Use the following playback functions when necessary.

Auto Play:	Playback will automatically begin when you insert a disk.
Song Interval Time:	Specify the time interval between songs during continuous playback.
Auto Rewind:	When you press **STOP** during playback, the JV-50 will rewind to the beginning of the current song.

● Turning Auto Play on

(1) While holding SET, press PLAY.
The display will show the current setting (Off).

(2) Press FWD to turn Auto Play "On".
To turn Auto Play off again, press **BWD**.

(3) Press SET to complete the operation.

● Changing the Song Interval Time (0—99 seconds in 1 second steps)

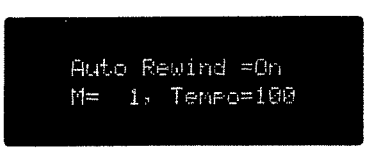
(1) While holding SET, press PAUSE.
The display will show the current Song Interval Time.

(2) Use BWD/FWD to specify the Song Interval Time.

(3) Press SET to complete the operation.

● Turning Auto Rewind off

(1) While holding SET, press STOP.
The display will show the current setting (On).



(2) Press BWD to turn Auto Rewind " Off".
To turn Auto Rewind on again, press **FWD**.

(3) Press SET to complete the operation.

Copying Song Data

You can copy song data to other disks. This allows you to collect songs from different disks onto a single disk for convenient playback.
There are two ways to copy song data; copy only a single song, or copy an entire disk.

* If the copy destination disk contains song data with the same name as the copied data, be sure to change the name of the song data before you copy it.
* Some songs have a Copyright Notice (data for protecting the composer's copyright) stored with them. The data of these songs can be copied from the master as many times as you want but another copy cannot be made from the data that was copied from the master. That is, you cannot make a copy of a copy.

● Copy only one song

1 Insert the copy source disk.

2 Use the SONG buttons ◀/▶ to select the song you wish to copy.

3 While holding REC, press SET.
The display will ask "Are You Sure?".

4 Press REC.

5 After a while, the display will ask "Insert Dst. Disk".

6 Insert the copy destination disk, and press REC.
When copying is completed, the song number of the copied song will be displayed.
If the amount of data is large and cannot be copied in a single pass, the display will ask "Insert Src. Disk". Insert the copy source disk, and repeat steps 5 and 6 until copying is completed.

● Copy all songs

1 Insert the copy source disk.

2 While holding REC, press REPEAT.
The display will ask "Are You Sure?".

3 Press REC.

4 After a while, the display will ask "Insert Dst. Disk"

5 Insert the copy destination disk, and press REC.
If the amount of data is large and cannot be copied in a single pass, the display will ask "Insert Src. Disk". Insert the copy source disk, and repeat step 4 and 5 until copying is completed.

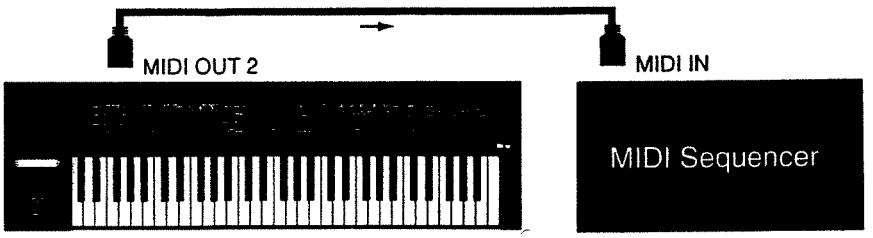
Synchronized Playback with Other MIDI Devices

The JV-50 is able to playback in synchronization with other sequencers and computers. This allows you to play a song using two or more sequencers at once.

● Synchronize other devices to the JV-50

Connections and preparation

If you wish to synchronize other devices to the JV-50, make connections as shown below. Set the other sequencer to use incoming MIDI Clock messages as its timing source.



* *The JV-50 is already set to operate on its own internal clock and to transmit MIDI Clock messages, so there is no need to change the settings on the JV-50.*

Synchronized playback

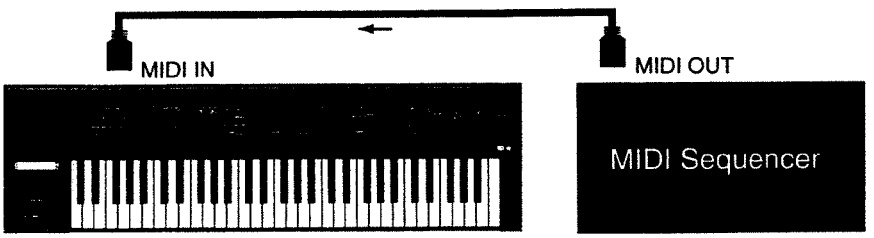
Prepare the JV-50 and the other sequencer for playback, and start playback on the JV-50. When playback begins, the other sequencer will begin playing back in synchronization with the MIDI Clock messages from the JV-50. You can adjust the playback tempo on the JV-50.

* *If you wish to temporarily cancel synchronization, turn off the MIDI Clock Out (☛ P.72).*

● Synchronize the JV-50 to other devices

Connections and preparation

If you wish to synchronize the JV-50 to other devices, make connections as shown below. Set the other sequencer to use its own internal clock as its timing source.



Synchronized playback

Prepare the JV-50 and the other sequencer for playback, and start playback on the other sequencer. When playback begins, the JV-50 will begin playing back in synchronization with the MIDI Clock messages from the other sequencer. You can adjust the playback tempo on the other sequencer.

* *If the JV-50 MIDI clock was set to "AUTO", it may not operate correctly depending on the sequencer used. In such a case set, the MIDI clock to "MIDI" (☛ P.72).*

● MIDI Clock Select

These settings determine how the JV-50 handles MIDI Clock messages. Normally you will leave this set to Internal, but in some cases you may need to change it.

Auto: Normally use the internal clock. If Start and MIDI Clock messages are received from an external MIDI device, playback will occur in synchroniza tion with the MIDI Clock from the external MIDI device.
Internal: Use the internal clock. MIDI Clock messages from an external MIDI device will be ignored.
MIDI: Use MIDI Clock messages from the MIDI IN connector.
Remote: Use the internal clock. However, play/stop can be controlled from an external MIDI device. (☛ P.73)

① While holding SET, press TEMPO ◀.
The display will show the current setting.

② Use BWD/FWD to select the setting.

③ Press SET to complete the operation.

● MIDI Clock Out on/off

① While holding SET, press TEMPO ▶.
The display will show the current setting.

② Use FWD/BWD to turn MIDI Clock Output On or Off.

③ Press SET to complete the operation.

■ Controlling Play/Stop from an External MIDI Device

You can control the **STOP** and **PLAY** functions of the JV-50 from an external MIDI device.
For example, if you are using a MIDI keyboard that has a built-in sequencer, or a MIDI keyboard that is able to transmit start/stop messages (such as the A-80), you can remotely control JV-50 playback from the play/stop buttons of your MIDI keyboard.
When using an external MIDI device to control the JV-50, set the JV-50's MIDI Clock to "Remote".

* *If you wish to begin playback by remote control from the point where playback stopped, set the Auto Rewind function to Off (☛ P.69).*
* *When Remote is selected, the JV-50 will use its own internal clock, and will not synchronize to MIDI Clock messages from an external MIDI device.*

● Set MIDI Clock to "Remote"

① **While holding SET, press TEMPO ◀.**
The display will show the current setting.

② **Use BWD/FWD to select "Rem t." (Remote).**

③ **Press SET to complete the operation.**

Conversion Processing for High-Speed Forward/Backward

Convert the song data in order to make the speed of fast forward/rewind operations faster than usual. When converting the song data of format 1, it is converted into format 0.
There are two methods of conversion: one is to convert only one song, and the other is to convert an entire disk.

* *The original song data will be erased when converting. To retain the original song data, copy it before using the conversion function. (☛ p.70)*
* *The conversion function cannot be executed when: 1) song data is incompatible with or cannot be played by the JV-50, or 2) when insufficient memory space is left on the disk.*
* *The speed of the Forward/Backward returns to the original speed when the converted song data is edited by another sequencer or computer. Convert the data back again.*
* *Standard MIDI files of Format 1 can be converted only if they have fewer than 17 tracks.*
* *When this conversion is done, a controlling file is made for each song's data. The JV-50 counts a single controlling file as one song. Therefore, the maximum number of the songs which can be recorded to the disk is actually less than 99.*

● Converting only one song

❶ Insert the disk.

❷ Use the SONG ◀/▶ buttons to select the song you wish to convert.

❸ While holding REC and STOP, press SINGLE.
The display will ask "Are You Sure?".

❹ Press REC.
When conversion is complete, the song number of the converted song will be displayed.

(Before Conversion)

(After Conversion)

● Converting all songs on a disk

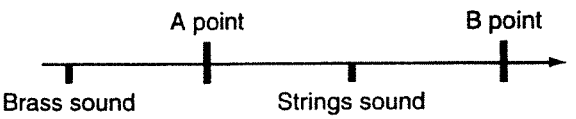
❶ Insert the disk.

❷ While holding REC and STOP, and then press REPEAT.
The display will ask "Are You Sure?".

❸ Press REC.

■ MIDI Update

The JV-50 provides a MIDI Update function that ensures that even when you resume playback from the middle of a song (e.g., after forward, backward, or block repeat), playback will resume correctly.
Song data contains many types of MIDI messages. When song data is played back from the beginning, it transmits these MIDI messages in the correct order to play the MIDI sound source. However, if you use forward or backward, etc. to change the location from which playback begins, the MIDI messages that were skipped over (Program Change messages, Control Change messages, etc.) will not be transmitted to the MIDI sound source. This means that when playback resumes, the sound may not be correct.
For example, if the song data contains Program Change messages (messages that select sounds) as shown below, when you rewind from point B to point A and then begin playback from point A, the string sound will be heard even though the brass sound should be selected.



To solve such problems, the JV-50 provides a MIDI Update function. If MIDI Update is turned on, the song data will be checked from the beginning and the appropriate messages will be transmitted to ensure that the sound source will have the correct settings, even if you change the point from which to begin playback.
When the JV-50 is shipped, MIDI Update is turned on, and in most cases this will be the setting you want. However, if the amount of song data is huge, in some cases it will not be possible to process the data correctly. In this case, while holding **CLEAR**, pressing **STOP** will transmit all MIDI messages (except note messages) from the beginning of the song to the current position.
The MIDI Update function can be turned "Off" if necessary.

● MIDI Update on/off

① While holding SET, press FWD.
The display will show the current setting (On).

② Press BWD to turn MIDI Update " Off".
To turn it On, press **FWD**.

③ Press SET to complete the operation.

Other Settings

● ON/OFF for Auto Send of All Note Off Messages

When all the notes of a certain MIDI channel are muted (when all the notes are turned to Note OFF) on the JV-50, you can select whether or not to transmit the All Note Off messages of that channel through MIDI OUT 1 and 2. Normally, you may set it
to OFF, by setting it to ON, however, you can minimize the trouble such as a sound module keeps on sounding when it should not.

❶ Press SET + BWD.
The display shows Auto Send ON or OFF currently selected.

❷ Press FWD to turn it ON .
To turn it OFF again, press **BWD**.

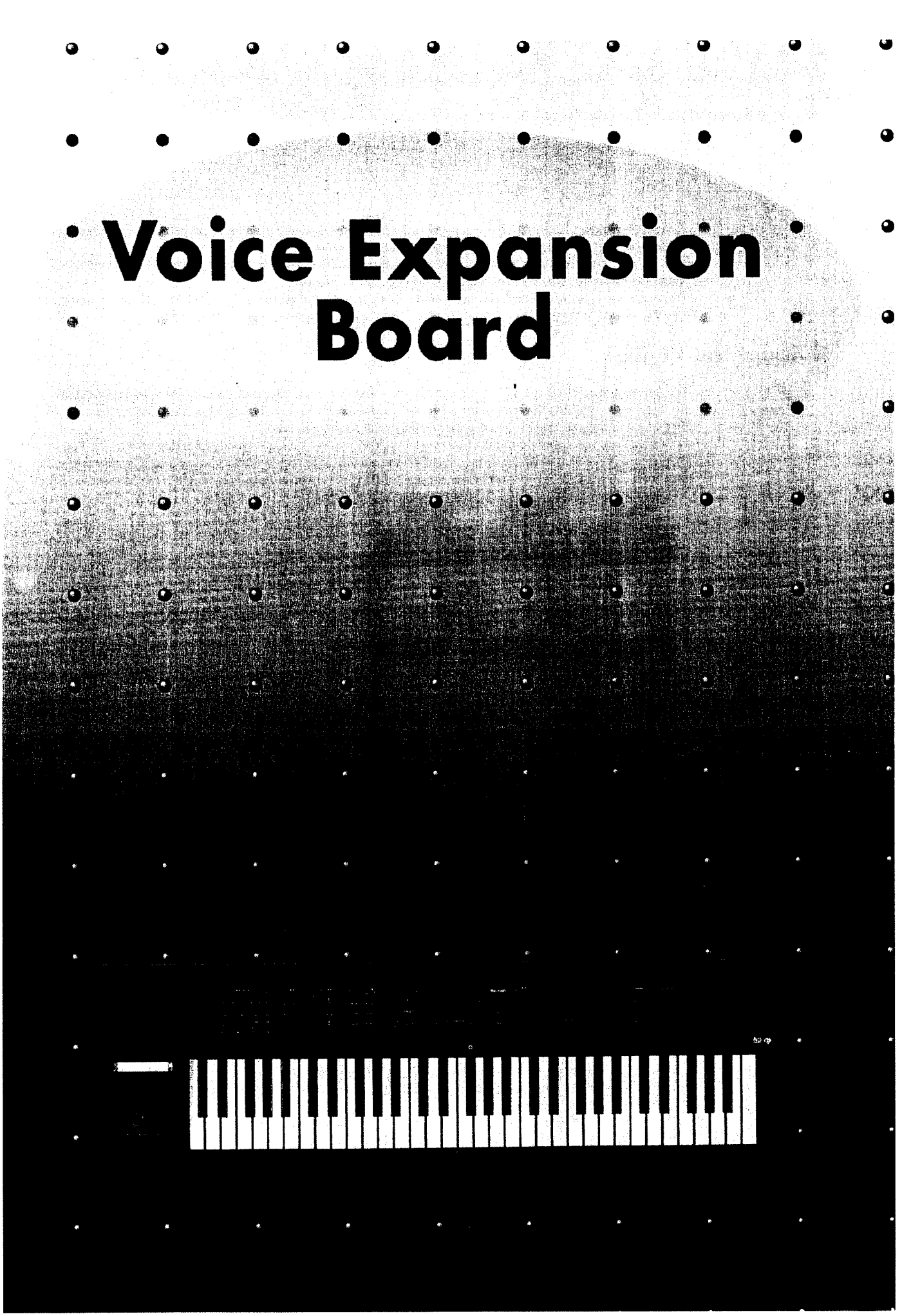
❸ Press SET to complete the procedure.

● ON/OFF of the Active Sensing Message Send

By sending signals (active sensing) in certain intervals, the JV-50 checks disconnection or breaking of MIDI cables. If, however, it occurs that the connected MIDI device
cannot process the active sensing messages sent from the JV-50 correctly and therefore cannot be played properly, turn OFF the Active Sensing Message Send as follows:

❶ Switch on the unit while holding CLEAR down.
Now, no Active Sensing Message will be sent. To send the Active Send Messages, turn off the unit then turn it on again.

Voice Expansion Board

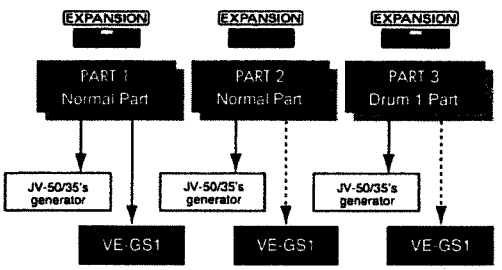


Expanding the JV-50/35's Sound Generator

A Voice Expansion Board can be installed inside the JV-50/35. Once installed, you increase the maximum polyphony and gain access to a much larger selection of sounds.
Remove the cover on the bottom of the JV-50/30 and install the Voice Expansion Board VE-GS1 or VE-JV1 in the JV-50/35. For details, refer to the VE-GS1 or VE-JV1 manual.
There are two types of Voice Expansion boards that can be installed in the JV-50/35: the VE-GS1 and the VE-JV1. The sound generator on each of these Voice Expansion boards functions differently.

■ About the VE-GS1

The sound generator on the VE-GS1 is exactly the same as the sound generator contained in the JV-50/35. By installing a VE-GS1, the maximum polyphony of the JV-50/35 is increased from 28 to 56 voices.
The unit will then be more than adequate as a GM/GS sound generator.
For every Part, you can determine whether you want to use the VE-GS1 sound generator or not. The Part that use the VE-GS1 will basically be played by the VE-GS1 and the JV-50/35's sound module alternately. However, only the JV-50/35's generator sounds for Parts set to Drum Parts 1/2, or that have Solo set to ON.



Make settings for Parts that are to use the sound generator on the VE-GS1 as follows:

Select the Part using PART ◄/► and press EXPANSION.
The sound generator on the VE-GS1 will be used by Parts for which the indicator on **EXPANSION** is lit. You then do not need to worry that notes will be left out when playing that Part. Parts for which the indicator is dark will sound using only the JV-50/35's sound generator.

When you have a Voice Expansion Board VE-GS1 installed, it is probably best to turn **EXPANSION** ON for every Part and use Voice Reserve to set up the appropriate system of voice priority.

If you press **EXPANSION** when you do not have a Voice Expansion Board installed, the indicator on the button does not light, and the following will be shown in the display.

● If the JV-50/35 receives GS Reset when it includes the VE-GS1

If the JV-50/35 receives GS Reset when it is connected to the VE-GS1, **EXPANSION** in all the Parts will be automatically turned on, setting it so that both sound modules of the JV-50/35 and VE-GS1 will be played. However, only the JV-50/35' sound module will be palyed in the Drum Part or the Part where the Solo/Portamento function is turned on.

■ About the VE-JV1

The VE-JV1 is an 8-Part multi-timbral sound generator. Its maximum polyphony is 28 voices and it provides a collection of synthesizer-like sounds. By adding it to the JV-50/35, your instrument will be able to produce sounds which are much more typical of electronically synthesized sounds. With the VE-JV1 installed, your JV-50/35 will behave like it contains two different sound generating units.

There are 16 Parts in the JV-50/35. Of these, 8 Parts can be set so they use the VE-JV1. Follow the steps below to specify the Parts that are to be played using the VE-JV1.

Each sound on the VE-JV1 is called "Patch" while it is called "Tone" on the JV-50/35.

* *The VE-JV1 is provided with Parts 1—7 specific for playing Patches and one Rhythm Part for playing rhythm.*

Select the Part using PART ◄/► and press EXPANSION.
Parts for which the **EXPANSION** indicator is dark will sound using the JV-50/35's sound generator, while Parts for which it is lit will sound using the VE-JV1.

If you press **EXPANSION** when you do not have a Voice Expansion Board installed, the indicator on the button will not light and the following will be shown in the display.

The Voice Expansion Board VE-JV1 features 8 Parts. You can assign each Part of the VE-JV1 to any Part on the JV-50/35.

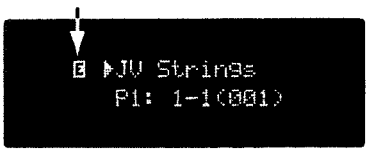
Select a Part on the JV-50/35 with PART ◄/►, then press EXPANSION and specify the Part using the VALUE/VALUE slider without releasing EXPANSION.
The Display responds as shown below and you can select any Part on the VE-JV1.

VE-JV1's Parts 1—7 are shown as "Exp Part 1, Exp Part 2..." and the Rhythm Part as "Exp Rhythm". If you do not particularly assign the VE-JV1s Part ot the JV-50/35, the VE-JV1's Parts are assigned to the JV-50/35 as follows.

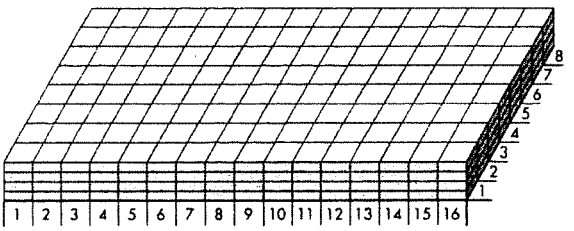
JV-50/35's Parts	VE-JV1's Parts
1	Exp Part 1
2	Exp Part 2
3	Exp Part 3
4	Exp Part 4
5	Exp Part 5
6	Exp Part 6
7	Exp Part 7
8	Exp Part 1
9	Exp Part 2
10	Exp Rhythm
11	Exp Part 3
12	Exp Part 4
13	Exp Part 5
14	Exp Part 6
15	Exp Part 7
16	Exp Rhythm

● About the VE-JV1 Patches

Parts for which the **EXPANSION** indicator is lit will sound using the Patches on the VE-JV1. Similar to the instrument itself, the VE-JV1 offers Preset Patches and User Patches.
To select a User Patch, press **USER.** To select a Preset Patch, press **PRESET.**
A Part that is played by the VE-JV1's sound module is indicated in the Display as follows.



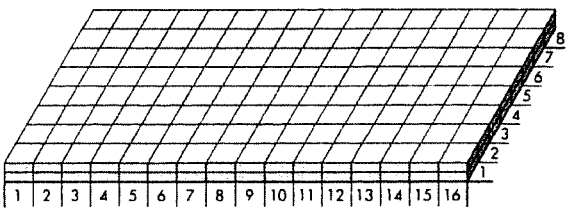
○ Preset Patches



There are 128 Preset Patches within each of the four Patches Maps, for a total of 512 Patches.

Press **VARIATION** enough times to select the desired Patch Map (1—4). 128 Patches can be selected through the various combinations of **TONE GROUP 1—16** and **NUMBER 1—8.**

○ User Patches



Patches already contained in the VE-JV1 can be edited, then stored as a User Patches. Similar to the JV-50/35, a total of 256 User Tones can be created and stored — with 128 each for Tone Maps 1 and 2 on the Voice Expansion Board.

The way in which Patches are edited is the same as with those on the JV-50/35.
Also, to store an edited Patches, press **VARIATION** while holding down **WRITE** and select the Tone Map into which the Tone is to be placed. Then while still holding down **WRITE** press a blinking **NUMBER 1—8.**

● About VE-JV1 Drum Sets

Drum Sets in the VE-JV1 can be used with Parts for which the **EXPANSION** indicator is lit. The VE-JV1 also provides Preset and User Drum Sets.

To select a User Drum Set, press **USER.** To select a Preset Drum Set, press **PRESET.**

○ Preset Drum Sets

There are 8 Drum Sets in the VE-JV1. With Parts for which the **EXPANSION** indicator is lit, press **DRUM 1** and select the desired Drum Set by pressing **NUMBER 1—8.**

○ User Drum Sets

The way in which Drum Sets are edited is the same as with Drum Sets on the JV-50/35.
To store an edited Drum Set, press a blinking **NUMBER 1—8** while holding down **WRITE**.

● If the JV-50/35 receives GS Reset while the VE-JV1 is connected

If the JV-50/30 receives GS Reset when it includes the VE-JV1, **EXPANSION** in all the Parts will be automatically turned off and it is set so that only the JV-50/35 will be played.

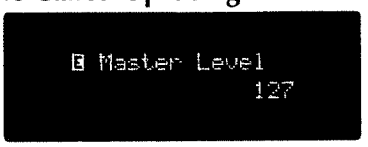
● Making Changes in Settings Common to the VE-JV1 As a Whole

How To Make The Settings

Select a Part to be played by the VE-JV1. Then call up parameters and edit them using the same procedures explained in "Making Changes in Settings Common to the JV-50/35 As a Whole."

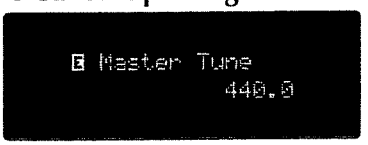
Buttons/Parameters/Setting Ranges

○ Parameters Called Up Using **LEVEL**



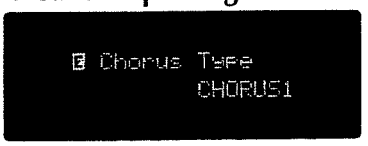
Expansion Master Level
Acceptable Values: 0—127
Sets the volume for the VE-JV1.

○ Parameters Called Up Using **TUNE**



Expansion Master Tune
Acceptable Values: 415.3—466.2
Adjusts the standard pitch of the VE-JV1.

○ Parameters Called Up Using **EFFECT**



Expansion Chorus Type
Acceptable Values: Chorus 1/2/3
This determines the Chorus effect type included in the VE-JV1.

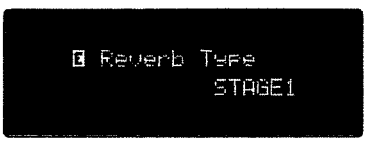
Expansion Chorus Level
Acceptable Values: 0—127
This sets the depth of the Chorus effect included in the VE-JV1.

Expansion Chorus Depth
Acceptable Values: 0—127
This sets the depth of the modulation of the Chorus effect included in the VE-JV1.

Expansion Chorus Rate
Acceptable Values: 0—127
This sets the rate of the modulation of the Chorus effect included in the VE-JV1.

Expansion Chorus Feedback
Acceptable Values: 0—127
Increasing the value will create more unusual sound.

Expansion Chorus Out
Acceptable Values: MIX, REV
When it is set to MIX, the direct sound before taking on the Chorus effect and the chorus sound are mixed and output.
When it is set to REV, the chorus sound after taking on the Chorus effect will be sent to the Reverb Effect on the VE-JV1.



Expansion Reverb Type
Acceptable Values: ROOM 1/2, STAGE 1/2, HALL 1/2, DELAY, PAN-DLY
This determines the Reverb effect type included in the VE-JV1.

Expansion Reverb Level
Acceptable Values: 0—127
This sets the depth of the Chorus effect type included in the VE-JV1.

Expansion Reverb Time
Acceptable Values: 0—127
This sets the reverb time or delay time.

Expansion Chorus Feedback
Acceptable Values: 0—127
Higher values enhance the Reverb effect.
When Delay is being selected, the value set here determines the number of delay repeats.

○ Parameters Called Up Using **MIDI**

The types of parameters that you can access using this button are the same as those for the JV-50/35.

○ Parameters Called Up Using **CONTROL**

Expansion MIDI Through
Acceptable Values: ON, OFF
When it is set to ON, the Note On messages received through MIDI IN will be sent to the sound module on the Voice Expansion Board no matter how the **EXPANSION** set.
When it is set to OFF, the Note On messages received through MIDI IN will be sent exclusively to the Part of the MIDI Expansion board where the **EXPANSION** is set to ON.

Expansion Output Level
Acceptable Values: HIGH, LOW
This sets the output level of the VE-JV1. You may change the values when the volume balance is not even when playing back song data.

● Altering Settings For Individual Parts

How to Make the Settings

Select a Part to be played by the VE-JV1. Then call up parameters and edit them using the same procedures explained in "Altering Settings For Individual Parts."

Buttons/Parameters/Setting Ranges

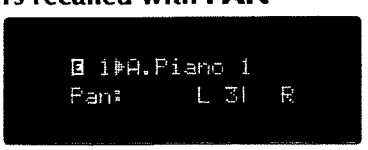
For each Part to be played by the VE-JV1 the parameter settings must be made individually.

○ Parameters recalled with **LEVEL**

They are almost the same as the parameters taht can be set on the JV-50/35. For a detailed explanation, refer to "Altering Settings For Individual Part" (☛ p. 39).

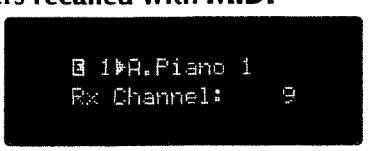
Expansion Part Level
Valid Values: 0—127
This sets the volume of the Part played with the VE-JV1.

○ Parameters recalled with **PAN**



Expansion Part Pan
Valid Valies: L64—0—R63
This sets the Pan of the Part played with the VE-JV1.

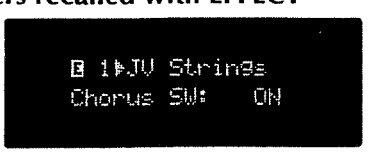
○ Parameters recalled with **MIDI**



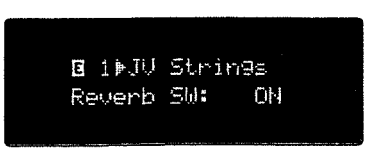
Expansion Receive Channel
Valid Values: 1—16, OFF
This determines the MIDI receive channel of the Part played with the VE-JV1.

** Bulk Dump (Part) cannot be done in the Part that is set so that it will be played with the VE-JV1.*

○ Parameters recalled with EFFECT



Expansion Chorus Switch
Valid Values: ON, OFF
This turns on or off the Chorus effect of the Part played with the VE-JV1.

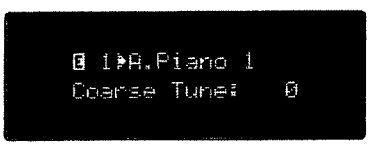


Expansion Reverb Switch
Valid Value: ON, OFF
This turns on off the Reverb effect of the Part that is played with the VE-JV1.

○ Parameters Called Up Using CONTROL

Bend Down Range
Acceptable Values: -48—0
Sets the amount by which the pitch will be lowered when the Bender/Modulation Lever is moved all the way to the left. The setting is in semitones, up to a maximum of 4 octaves.

Bend Up Range
Acceptable Values: 0—+12
Sets the amount by which the pitch will be raised when the Bender/Modulation Lever is moved all the way to the right. The setting is in semitones, up to a maximum of 1 (?) octave.



Coarse Tune
Acceptable Values: -48—0—+48
Adjusts the pitch at which the instrument will sound (in semitone units). When at "0," no pitch change is obtained.

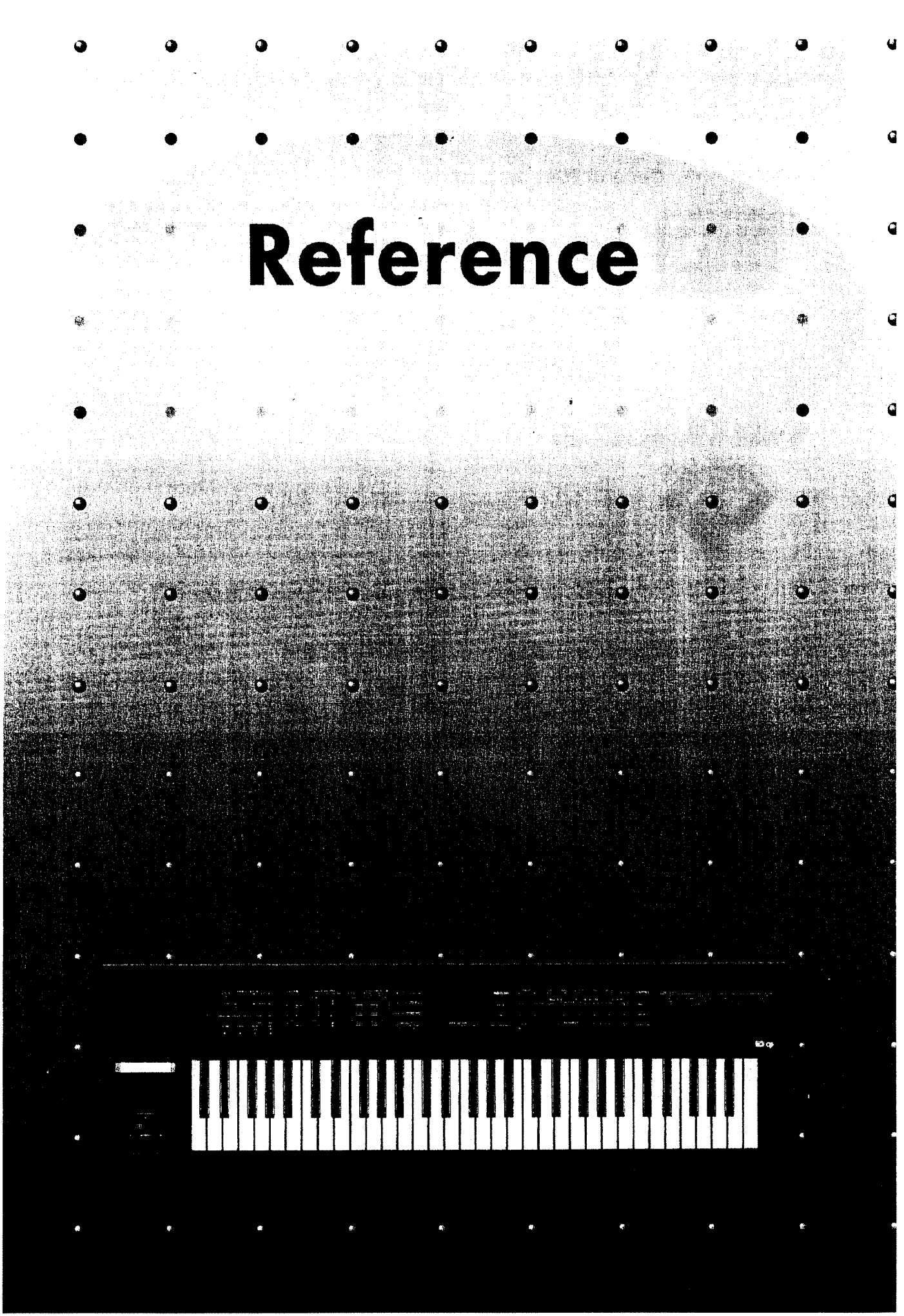
Fine Tune
Acceptable Values: -50—0—+50
Used to finely tune the pitch at which the instrument will sound. At "50" the pitch is altered by exactly one quarter-tone.

Expansion Voice Reserve
Acceptable Values: 0—28
This setting determines the minimum number of voices that will always be reserved and made available for a certain Part. This setting is useful for situations in which the total number of voices that need to be produced may exceed the VE-JV1's's maximum polyphony.
For example, if Voice Reserve is set to "6" for a particular Part, that Part will always be able to sound at least 6 voices, even when the VE-JV1 as a whole is being requested to produce more voices than it is capable of producing at one time.
* *Since the maximum polyphony of the VE-JV1 is 28 voices, the values set for Voice Reserve for all Parts combined must add up to 28 or less.*

■ Note on using the Voice Expansion Board

If you do as follows, the actual values of parameters set on the sound module may differ from those shown in the Display
When you set the receive channel of the Part where the **EXPANSION** indicator is lit to OFF and edit the parameters using the panel buttons.
When you edit the parameters of the sound module in the Voice Expansion Board using the System Exclusive messages sent from an external device.
To match the settings on the sound module to the Display's indication, change the settings on the Expansion Board using the Expansion Setup below. To call this display, make the **MASTER** indicator light up with the Voice Expansion Board connected correctly, then press **CONTROL** and **PARAMETER** ▲. Then press **WRITE**, and the values set on the JV-50/35 will be sent to the Voice Expansion Board.

Reference



The General MIDI System and GS Format

● What is the General MIDI System?

The General MIDI System is a universal set of specifications for sound generating devices which has been agreed upon by both the Japanese MIDI Standards Committee and the American MMA (MIDI Manufacturer's Association). These specifications seek to allow for the creation of music data which is not limited to equipment by a particular manufacturer or to specific models.

The General MIDI System defines things such as the minimum number of voices that should be supported, the MIDI messages that should be recognized, which sounds correspond to which Program Change numbers, and the layout of rhythm sounds on the keyboard. Thanks to these specifications, any device that is equipped with sound sources supporting the General MIDI System will be able to accurately reproduce General MIDI Scores (music data created for the General MIDI System), regardless of the manufacturer or model.

● What is the GS Format?

The GS Format is a standardized set of specifications for Roland's sound sources which defines the manner in which multi-timbral sound generating units will respond to MIDI messages. The GS Format also complies with the General MIDI System.

The GS Format also defines a number of other details. These include unique specifications for sounds and the functions available for Tone editing and effects (chorus and reverb), and other specifications concerning the manner in which sound sources will respond to MIDI messages.

This product supports both General MIDI and GS.
Song data which carries either of these logos can be accurately reproduced.

Troubleshooting

When for some reason no sound is produced, or you suspect the unit is not operating as it should, check the items below first. If you are still unable to achieve normal operation, contact your retailer or the nearest Roland Service Station.

■ Synthesizer Section

◆No Sound/Sound Too Low

- **Are you sure you don't have the volume set too low?**
  Recheck the volume settings you have on this unit, and any amplifier or mixer you have connected.

- **Can sound be heard through headphones?**
  If so, you may have a cord that is damaged, or the amplifier or mixer you have connected could likely be the source of the problem. Check the cables being used, and the equipment you have connected.

- **Are you sure you do not have the Local Control MIDI parameter set at OFF?**
  Set it to Local ON (☛ p. 36).

- **Are you sure the volume levels set for all Parts/individual Parts are not too low?**
  Recheck the Master level (☛ p. 34) and individual Part levels (☛ p. 39).

- **Is it possible that the volume for some Parts is set too low as a result of Volume messages received from an external device?**
  Try changing the Part.

- **Are you sure the Transmit channel matches the Receive channel used by the other device?**
  Refer to "Transmit Channel" (☛ p. 36), and "Receive Channel" (☛ p. 40).

◆The Pitch Is Not Right

- **Could the setting for Master Tune possibly be incorrect?**
  Check the setting.

- **Are you sure you don't have Transpose set at "ON"?**
  Press **TRANSPOSE** to turn it OFF.

- **Is the setting for Key Shift appropriate?**
  Check the setting (☛ p. 40).

- **Is the pitch wrong?**
  Has pitch bend data been received, leaving the pitch "hanging" at some non-zero value?
  Return the Bender/Modulation lever to the center positon on transmit the center value (63) of the pitch bend message.

◆ Tones Don't Change Properly

- **Are you sure you don't have Local Control set to OFF?**
  Set it to Local ON (☛ p. 36).

- **Could you have the Tone Change Receive Switch set to OFF?**
  Set the Tone Change Receive Switch to ON.

- **Could you possibly be in the ROM Play mode?**
  Press **LEVEL+PAN** to exit the ROM Play mode.

◆ Effects Do Not Work

- **Are you sure the level set for Chorus/Reverb for Master/Parts is not too low?**
  Recheck the settings.

- **Are the indicators on the relevant Effects switches (Chorus and Reverb) lit?**
  Press the buttons to turn them ON.

■ About SMF Player

◆ The disk drive will not work

Be sure to use only the included AC adaptor.

◆ Cannot record

Is a disk inserted into the disk drive?

◆ Cannot use Block Repeat playback.

Are the REPEAT and SINGLE indicators lit?
If they are not, press the buttons. (the indicators should light.)
Have you selected a song for which a repeat area has been specified?

◆ The sound is incorrect when you begin playback from the middle of the song.

Has the MIDI Update function been turned on? (☛ P.75)

Error Messages

When a mistake in an operational procedure has been made, or the unit is unable to carry out a procedure properly, an Error Message will appear in the display. In such cases refer to the information below.

● Synthesizer Section

Reason: The unit's backup battery has been depleted.
Action: Contact you nearest Roland Service Station.

Reason: An excessive amount of MIDI data was received all at once, and could not be processed satisfactorily.
Action: Try reducing the amount of MIDI data that is sent to the unit.

Reason: Exclusive messages could not be received correctly.
Action: After checking the cables and connections, and the data that is to be transmitted, try performing the procedure again.

Reason: A MIDI cable is damaged or has become disconnected.
Action: Check the MIDI cables and the connections.

Reason: A Tone or Drum Set that does not exist in the JV-50/35 was requested by data received at MIDI IN, or contained in music data played on the JV-50's internal sequencer.
Action: Check the data in question, and alter it so only Tones or Drum Sets contained in the JV-50/35 are requested.

Reason: An external MIDI device or the SMF Player (JV-50 only) has requested a sound not contained in the JV-50/35.
Action: Make sure that only sounds contained in the JV-50/35 are requested.

Reason: You have pressed **EXPANSION** without using the Voice Expansion Board.
Action: Connect the Voice Expansion Board to increase the maximum number of voices or sounds.

● SMF Player Section (JV-50 only)

Reason: It is possible that the data on the disk has been corrupted, or that the disk itself has been damaged.
Action: Format the disk once again (☛ P.66). If the disk is still not usable, throw it away.

Reason: No more data can be stored on the disk.
Action: Either delete unneeded song data (☛ P.67), or use another disk.

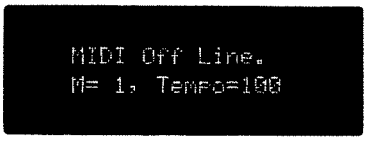
Reason: The protect tab of the disk is set to the PROTECT position.
Action: Set the protect tab of the disk to the WRITE position.

Reason: There is no disk in the drive.
Action: Insert a disk into the drive.

Reason 1: The disk does not contain any song data.
Action 1: Insert a disk that contains song data.
Reason 2: The file extensions of all song data recorded to the disk are not ".MID".
Action 2: Change the file extension to ".MID" with your sequencer or computer.

Reason 1: The song data uses a Time Base that cannot be used by the JV-50.
Action 1: If your sequencer or computer allows you to change the Time Base of a song, change it to a Time Base (☛ P.66) that the JV-50 is able to use.
Reason 2: The song data may be damaged.
Action 2: Delete the song data (☛ P.67).
Reason 3: The song data is a Standard MIDI File with a format other than 0 or 1 (of 17 tracks or less).
Action 3: The JV-50 cannot play this data. Use your sequencer or computer to convert it to a format 0 or 1 (of 17 tracks or less).
Reason 4: The song data is in Format 1 and contains 18 or more tracks.
Action 4: Use your computer or sequencer to modify the song data to 17 tracks or less.

Reason: The specified song data cannot be copied because it has a Copyright Notice assigned to it. Song data that contains a Copyright Notice can be copied from the master as many times as you want, but another copy cannot be made from the data that was copied from the master. That is, you cannot make a copy of a copy.
Action: Press **STOP** to cancel the operation. In the event that you want to copy the data of more than one song, press **REC** to copy the data of the next song.



Reason 1: The MIDI device connected to MIDI IN has been turned off.
Action 1: This is not a malfunction. Turn the MIDI device on again.
Reason 2: It is possible that the MIDI cable connected to MIDI IN has been disconnect or damaged.
Action 2: Check the MIDI cable connections.

Reason: A large amount of MIDI data was received in a short time, and could not be processed.
Action: Check that the transmitting device is not transmitting excessive amounts of MIDI data.

Reason: The MIDI cable connected to MIDI IN is not connected securely.
Action: Check the MIDI cable connections.

** With errors caused by the SMF Player, the display switches automatically to the SMF Player Error message.*

Tone Chart

• TONE GROUP 1 Piano

#	PC#	CC0#	Tone Name	V
1	1	0	Piano 1	1
		8	Piano 1w	1
		16	Piano 1d	1
2	2	0	Piano 2	1
		8	Piano 2w	1
3	3	0	Piano 3	1
		8	Piano 3w	1
4	4	0	Honky-tonk	2
		8	Honky-tonk 2	1
5	5	0	E. Piano 1	1
		8	Detuned EP 1	2
		16	E. Piano 1v	2
		24	60's E. Piano	1
6	6	0	E. Piano 2	1
		8	Detuned EP 2	2
		16	E. Piano 2v	2
7	7	0	Harpsichord	1
		8	Coupled Hps.	2
		16	Harpsi.w	1
		24	Harpsi.o	2
8	8	0	Clav.	1

• TONE GROUP 2 Chromatic Persussion

#	PC#	CC0#	Tone Name	V
1	9	0	Celesta	1
2	10	0	Glockenspiel	1
3	11	0	Music Box	1
4	12	0	Vibraphone	1
		8	Vib.w	1
5	13	0	Marimba	1
		8	Marimba w	1
6	14	0	Xylophone	1
7	15	0	Tubular-bell	1
		8	Church Bell	1
		9	Carillon	1
8	16	0	Santur	1

• TONE GROUP 3 Organ

#	PC#	CC0#	Tone Name	V
1	17	0	Organ 1	1
		8	Detuned Or. 1	2
		16	60's Organ 1	1
		32	Organ 4	2
2	18	0	Organ 2	1
		8	Detuned Or. 2	2
		32	Organ 5	2
3	19	0	Organ 3	2
4	20	0	Church Org.1	1
		8	Church Org.2	2
		16	Church Org.3	2
5	21	0	Reed Organ	1
6	22	0	Accordion Fr	2
		8	Accordion It	2
7	23	0	Harmonica	1
8	24	0	Bandneon	2

• TONE GROUP 4 Guitar

#	PC#	CC0#	Tone Name	V
1	25	0	Nylon.str. Gt.	1
		8	Ukulele	1
		16	Nylon Gt.o	2
		32	Nylon Gt.2	1
2	26	0	Steel-str. Gt.	1
		8	12-str. Gt.	2
		16	Mandolin	1
3	27	0	Jazz Gt.	1
		8	Hawaiian Gt.	1
4	28	0	Clean Gt.	1
		8	Chorus Gt.	2
5	29	0	Muted Gt.	1
		8	Funk Gt.	1
		16	Funk Gt.2	1
6	30	0	Overdrive Gt.	1
7	31	0	Distortion Gt.	1
		8	Feedback Gt.	2
8	32	0	Gt. Harmonics	1
		8	Gt. Feedback	1

• TONE GROUP 5 Bass

#	PC#	CC0#	Tone Name	V
1	33	0	Acoustic Bs.	1
2	34	0	Fingared Bs.	1
3	35	0	Picked Bs.	1
4	36	0	Fretless Bs.	1
5	37	0	Slap Bass 1	1
6	38	0	Slap Bass 2	1
7	39	0	Synth Bass 1	1
		1	Synth Bass 101	1
		8	Synth Bass 3	1
8	40	0	Synth Bass 2	2
		8	Synth Bass 4	2
		16	Rubber Bass	2

• TONE GROUP 6 Strings/orchestra

#	PC#	CC0#	Tone Name	V
1	41	0	Violin	1
		8	Slow Violin	1
2	42	0	Viola	1
3	43	0	Cello	1
4	44	0	Contrabass	1
5	45	0	Tremolo Str	1
6	46	0	PizzicatoStr	1
7	47	0	Harp	1
8	48	0	Timpani	1

•TONE GROUP 7 Ensemble

#	PC#	CC0#	Tone Name	V
1	49	0	Strings	1
		8	Orchestra	2
2	50	0	Slow Strings	1
3	51	0	Syn. Strings1	1
		8	Syn. Strings 3	2
4	52	0	Syn. Strings 2	2
5	53	0	Choir Aahs	1
		32	Choir Aahs 2	1
6	54	0	Voice Oohs	1
7	55	0	SynVox	1
8	56	0	OrchestraHit	2

#: Number
PC#: Program change number
CC0#: Value of control change number 0 (GS bank select number)
V: Number of voices

• TONE GROUP 8 Brass

#	PC#	CC0#	Tone Name	V
1	57	0	Trumpet	1
2	58	0	Trombone	1
		1	Trombone 2	2
3	59	0	Tuba	1
4	60	0	MutedTrumpet	1
5	61	0	French Horn	2
		1	Fr. Horn	2
6	62	0	Brass 1	1
		8	Brass 2	2
7	63	0	Synth Brass1	2
		8	Synth Brass 3	2
		16	AnalogBrass1	2
8	64	0	Synth Brass 2	2
		8	Synth Brass 4	1
		16	AnalogBrass2	2

• TONE GROUP 9 Reed

#	PC#	CC0#	Tone Name	V
1	65	0	Sporano Sax	1
2	66	0	Alto Sax	1
3	67	0	Tenor Sax	1
4	68	0	Baritone Sax	1
5	69	0	Oboe	1
6	70	0	English Horn	1
7	71	0	Bassoon	1
8	72	0	Clarinet	1

• TONE GROUP 10 Pipe

#	PC#	CC0#	Tone Name	V
1	73	0	Piccolo	1
2	74	0	Flute	1
3	75	0	Recorder	1
4	76	0	Pan Flute	1
5	77	0	Bottle Blow	2
6	78	0	Shakuhachi	2
7	79	0	Whistle	1
8	80	0	Ocarina	1

• TONE GROUP 11 Synth lead

#	PC#	CC0#	Tone Name	V
1	81	0	Square Wave	2
		1	Square	1
		8	Sine Wave	1
2	82	0	Saw Wave	2
		1	Saw	1
		8	Doctor Solo	2
3	83	0	Syn. Calliope	2
4	84	0	Chiffer Lead	2
5	85	0	Charang	2
6	86	0	Solo Vox	2
7	87	0	5th Saw Wave	2
8	88	0	Bass & Lead	2

• TONE GROUP 12 Synth pad etc.

#	PC#	CC0#	Tone Name	V
1	89	0	Fantasia	2
2	90	0	Warm Pad	1
3	91	0	Polysynth	2
4	92	0	Space Voice	1
5	93	0	Bowed Glass	2
6	94	0	Metal Pad	2
7	95	0	Halo Pad	2
8	96	0	Sweep Pad	1

• TONE GROUP 13 Synth SFX

#	PC#	CC0#	Tone Name	V
1	97	0	Ice Rain	2
2	98	0	Soundtrack	2
3	99	0	Crystal	2
4	100	0	Atmosphere	2
5	101	0	Brightness	2
6	102	0	Goblin	2
7	103	0	Echo Drops	1
8	104	0	Star Theme	2

• TONE GROUP 14 Ethnic

#	PC#	CC0#	Tone Name	V
1	105	0	Sitar	1
2	106	0	Banjo	1
3	107	0	Shamisen	1
4	108	0	Koto	1
		8	Taisho Koto	2
5	109	0	Kalimba	1
6	110	0	Bag Pipe	1
7	111	0	Fiddle	1
8	112	0	Shanai	1

• TONE GROUP 15 Percussive

#	PC#	CC0#	Tone Name		V
1	113	0	Tinkle Bell		1
2	114	0	Agogo		1
3	115	0	Steel Drums		1
4	116	0	Woodblock	*	1
		8	Castanets	*	1
5	117	0	Taiko	*	1
		8	Concert BD	*	1
6	118	0	Melo Tom 1	*	1
		8	Melo Tom 2	*	1
7	119	0	Synth Drum	*	1
		8	808 Tom	*	1
8	120	0	Reverse Cym.	*	2

• TONE GROUP 16 SFX

#	PC#	CC0#	Tone Name		V
1	121	0	Gt. FretNoise	*	1
		1	Gt. Cut Noise	*	1
		2	String Slap	*	1
2	122	0	Breath Noise		2
		1	Fl. Key Click	*	1
3	123	0	Seashore	*	1
		1	Rain	*	2
		2	Thunder	*	1
		3	Wind	*	1
		4	Stream	*	2
		5	Bubble	*	2
4	124	0	Bird	*	2
		1	Dog	*	1
		2	House-Gallop	*	1
5	125	0	Telephone 1	*	1
		1	Telephone 2	*	1
		2	Door Creaking	*	1
		3	Door	*	1
		4	Scratch	*	1
		5	Windchime	*	2
6	126	0	Helicopter	*	1
		1	Car-Engine	*	1
		2	Car-Stop	*	1
		3	Car-Pass	*	1
		4	Car-Crash	*	2
		5	Siren	*	1
		6	Train	*	1
		7	Jetpla	*	2
		8	Starship	*	2
		9	Burst Noise	*	2
7	127	0	Applause	*	2
		1	Laughing	*	1
		2	Screaming	*	1
		3	Punch	*	1
		4	Heart Beat	*	1
		5	Footsteps	*	1
8	128	0	Gun Shot	*	1
		1	Machine Gun	*	1
		2	Leasergun	*	1
		3	Explosion	*	2

#: Number
PC#: Program change number
CC0#: Value of control change number 0 (GS bank select number)
V: Number of voices
: All tones marked by an "" have an unreliable pitch. Please use a key around C4 (Key Number 60).

Drum Set Chart

	Note Number	PC# 1:STANDARD Set/ PC# 33:JAZZ Set	PC# 9:ROOM Set	PC# 17:POWER Set	PC# 25:ELECTRIC Set	PC# 26:TR-808 Set	PC# 41:BRUSH Set	PC# 49:ORCHESTRA Set
	27	High Q						Closed Hi-Hat [EXC 2]
	28	Slap						Pedal Hi-Hat [EXC 2]
	29	Scratch Push [EXC1]						Open Hi-Hat [EXC 2]
	30	Scratch Pull [EXC1]						Ride Cymbal
	31	Sticks						
	32	Square Click						
	33	Metronome Click						
	34	Metronome Bell						
C2	35	Kick Drum 2/Jazz BD2					Jazz BD 2	Concert BD 2
	36	Kick Drum 1/Jazz DB2		MONDO Kick	Elec BD	808 Bass Drum	Jazz BD 1	Concert BD 1
	37	Side Stick				808 Rim Shot		
	38	Snare Drum 1		Gated SD	Elec SD	808 Snare Drum	Brush Tap	Concert SD
	39	Hand Clap					Brush Slap	Castanets
	40	Snare Drum 2			Gated SD		Brush Swirl	Concert SD
	41	Low Tom 2	Room Low Tom 2	Room Low Tom 2	Elec Low Tom 2	808 Low Tom 2		Timbani F
	42	Closed Hi-hat [EXC2]				808 CHH [EXC 2]		Timbani F#
	43	Low Tom 1	Room Low Tom 1	Room Low Tom 1	Elec Low Tom 1	808 Low Tom 1		Timbani G
	44	Pedal Hi-hat [EXC2]				808 CHH [EXC 2]		Timbani G#
	45	Mid Tom 2	Room Mid Tom 2	Room Mid Tom 2	Elec Mid Tom 2	808 Mid Tom 2		Timbani A
	46	Open Hi-hat [EXC2]				808 OHH [EXC 2]		Timbani A#
	47	Mid Tom 1	Room Mid Tom 1	Room Mid Tom 1	Elec Mid Tom 1	808 Mid Tom 1		Timbani B
C3	48	High Tom 2	Room Hi Tom 2	Room Hi Tom 2	Elec Hi Tom 2	808 Hi Tom 2		Timbani c
	49	Clash Cymbal 1				808 Cymbal		Timbani c#
	50	High Tom 1	Room Hi Tom 1	Room Hi Tom 1	Elec Hi Tom 1	808 Hi Tom 1		Timbani d
	51	Ride Cymbal 1						Timbani d#
	52	Chinese Cymbal			Ride Cymbal			Timbani e
	53	Ride Bell						Timbani f
	54	Tambourine						
	55	Splash Cymbal						
	56	Cowbell						
	57	Crash Cymbal 2						Concert Cymbal 2
	58	Vibra-slap						
	59	Ride Cymbal 2						Concert Cymbal 1
C4	60	High Bongo						
	61	Low Bongo						
	62	Mute High Conga				808 High Conga		
	63	Open High Conga				808 Mid Conga		
	64	Low Conga				808 Low Conga		
	65	High Timbale						
	66	Low Timbale						
	67	High Agogo						
	68	Low Agogo						
	69	Cabasa						
	70	Maracas				808 Maracas		
	71	Short Hi Whistle [EXC 3]						
C5	72	Long Low Whistle [EXC 3]						
	73	Short Guiro [EXC 4]						
	74	Long Guiro [EXC 4]						
	75	Claves				808 Claves		
	76	High Wood Block						
	77	Low Wood Block						
	78	Mute Cuica [EXC 5]						
	79	Open Cuica [EXC 5]						
	80	Mute Triangle [EXC 6]						
	81	Open Triangle [EXC 6]						
	82	Shaker						
	83	Jingle Bell						
C6	84	Bell Tree						
	85	Castanets						
	86	Mute Surdo [EXC 7]						
	87	Open Surdo [EXC 7]						
	88	...	...	...	...	...	...	Applause (*)

PC#: Program number
... : No sound
Blank: Same as the percussion sound of "STANDARD"
[EXC]: Percussion sound of the same number will not be heard at the same time.

Parameter List

■ Parameters common to all parts

Parameter Name			Value	Factory Preset Setting
Level		*	0—127	127
Tune		*	415.3—440.0—466.2	440.0
Chorus	Level	*	0—127	64
	Type	*	Chorus 1/2/3/4 Feedback Chorus Flanger Short Delay Short Delay (FB)	Chorus 3
Reverb	Level	*	0—64—127	64
	Type	*	Room 1/2/3 Hall 1/2 Plate Delay Panning Delay	Hall 2
MIDI	Transmit Channel	*	Part, 1—16	Part
	Tone Change Receive Switch	*	OFF, ON	ON
	GS Reset Receive Switch	*	OFF, ON	ON
	System Exclusive Receive Switch	*	OFF, ON	ON
	Aftertouch Receive Switch	*	OFF, ON	ON
	Local Control		OFF, ON	ON
	User Bank Select Transmit Switch		OFF, ON	OFF
	Performance Dump Switch		OFF, ON	OFF
	Device ID Number		1—17—32	17
	Bulk Dump		—	—
	Tone Dump		—	—
	Drum Tone Dump		—	—
	GS/GM Setup		—	—
Transpose			OFF, ON	OFF
	Amount of Transposition	*	-24—0—+24	-12
Key Mode		*	OFF OCTAVE1 OCTAVE2 DUAL SPLIT	OFF
	Sprit Point	*	C2—C4—C#7	C4

■ Tone Edit Parameters

Parameter Name		Value
Vibrato	Vibrato Rate	−50—0—+50
	Vibrato Depth	−50—0—+50
	Vibrato Delay	−50—0—+50
Filter	Cutoff Frequency	−50—0—+50
	Resonance	−50—0—+50
Envelope	Atack Time	−50—0—+50
	Decay Time	−50—0—+50
	Release Time	−50—0—+50

■ Parameters for individual parts

Parameter			Value	Factory preset setting
Level		*	0—108—127 (100)	108
Pan		*	L63—0—R63, RND	0
Chorus Send Depth		*	0—40—127 (0)	40
Reverb Send Depth		*	0—64—127 (40)	64
MIDI	Receive Channel	*	OFF, 1—16	—
	Bulk Dump	*	—	—
Control	Bend Range	*	0—2—24	+2
	Modulation Depth	*	0—10—127	10
	Key Shift	*	-24—0—+24	0
	Velocity Sens Depth	*	0—64—127	64
	Velocity Sens Offset	*	0—64—127	64
	Voice Reserve	*	0—28	—
Tone Select		*	—	—
Effect On/Off	Chorus	*	OFF, ON	ON
	Reverb	*	OFF, ON	ON
Solo/Portamento ON/OFF		*	OFF, ON	OFF
Portamento Time		*	0—30—127 (0)	30

■ Drum tone edit parameters

Parameter Name	Value
Pitch	−24—0—+24
Level	0—127
Pan	L63—0—R63, RND
Reverb Depth	0—127

■ MIDI Controller Features Parameters

Parameter Name	Value
Expression	0—127
Pan	0—127
Control Change Number	0—9, 12—31, 64—95
Value	0—127

*: Parameters which can be recorded as part of a performance
( ): GS Default Setting
Blank: Same as the Factory Preset setting except "( )".

About Roland Exclusive Message

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all exclusive messages (type IV):

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
CMD	Command ID
[BODY]	Main data
F7H	End of exclusive

■ MIDI status: F0H, F7H
An exclusive message must be flanked by a pair of status codes, starting with a Manufacturer-ID immediately after F0H (MIDI version1.0).

■ Manufacturer-ID: 41H
The Manufacturer-ID identifies the manufacturer of a MIDI instrument that triggers an exclusive message. Value 41H represents Roland's Manufacturer-ID.

■ Device-ID: DEV
The Device-ID contains a unique value that identifies the individual device in the multiple implementation of MIDI instruments. It is usually set to 00H — 0FH, a value smaller by one than that of a basic channel, but value 00H — 1FH may be used for a device with multiple basic channels.

■ Model-ID: MDL
The Model-ID contains a value that uniquely identifies one model from another. Different models, however, may share an identical Model-ID if they handle similar data.

The Model-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model-IDs, each representing a unique model:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

■ Command-ID: CMD
The Command-ID indicates the function of an exclusive message. The Command-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command-IDs, each representing a unique function:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

■ Main data: BODY
This field contains a message to be exchanged across an interface. The exact data size and contents will vary with the Model-ID and Command-ID.

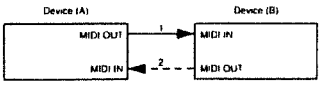
2. Address-mapped Data Transfer

Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records--waveform and tone data, switch status, and parameters, for example--to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures: one-way transfer and handshake transfer.

■ One-way transfer procedure
(See Section 3 for details.)
This procedure is suited for the transfer of a small amount of data. It sends out an exclusive message completely independent of a receiving device status.

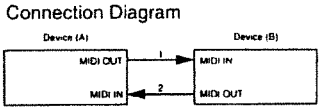
Connection Diagram



Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

■ Handshake-transfer procedure
(This device does not cover this procedure)
This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above two procedures
- *There are separate Command-IDs for different transfer procedures.*
- *Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device-ID and Model ID, and are ready for communication.*

3. One-way Transfer Procedure

This procedure sends out data all the way until it stops and is used when the messages are so short that answerbacks need not be checked.
For long messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts intervals of at least 20 milliseconds in between.

Types of Messages

Meddage	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

■ Request data #1: RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.
On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.
If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device will send out nothing.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
	LSB
ssH	Size MSB
	LSB
sum	Check sum
F7H	End of exclusive

* *The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.*
* *Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.*
* *The same number of bytes comprises address and size data, which, however, vary with the Model-ID.*
* *The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.*

■ Data set 1: DT1 (12H)

This message corresponds to the actual data transfer process.
Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more data as well as a series of data formatted in an address- dependent order.

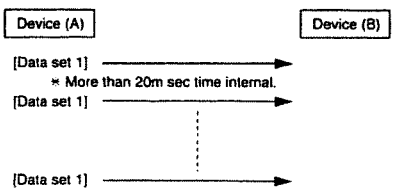
The MIDI standards inhibit non-real time messages from interrupting an exclusive one. This fact is inconvenient for the devices that support a "soft-through" mechanism. To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate segments.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
41H	Command ID
aaH	Address MSB
	LSB
ssH	Size MSB
	LSB
sum	Check sum
F7H	End of exclusive

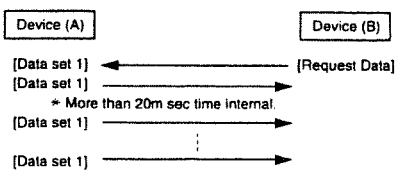
* *A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.*
* *Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.*
* *The number of bytes comprising address data varies from one Model-ID to another.*
* *The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.*

■ Example of Message Transactions

● Device A sending data to Device B
Transfer of a DT1 message is all that takes place.



● Device B requesting data from Device A
Device B sends an RQ1 message to Device A. Checking the message, Device A sends a DT1 message back to Device B.



EXPANDABLE SYNTHESIZER
Model JV-50/35

MIDI Implementation

Date : Oct.15 1993
Version : 1.00

1. Receive Data (SMF player section : JV-50 only)

1.1 Message stored in RECORD mode

■ Channel Voice Messages

● Note off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
kk= Note number :00H - 7FH (0 - 127)
vv= Velocity :00H - 7FH (0 - 127)

● Note on

Status	Second	Third
9nH	kkH	vvH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
kk= Note number :00H - 7FH (0 - 127)
vv= Velocity :00H - 7FH (0 - 127)

● Polyphonic key pressure (Polyphonic Aftertouch)

Status	Second	Third
AnH	kkH	vvH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
kk= Note number :00H - 7FH (0 - 127)
vv= Value :00H - 7FH (0 - 127)

● Control change

Status	Second	Third
BnH	kkH	vvH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
kk= Note number :00H - 78H (0 - 120)
vv= Value :00H - 7FH (0 - 127)

● Program change

Status	Second
CnH	ppH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
pp= Program number :00H - 7FH (0 - 127)

● Channel pressure (Channel Aftertouch)

Status	Second
DnH	vvH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
vv= Value :00H - 7FH (0 - 127)

● Pitch bend change

Status	Second	Third
EnH	llH	mmH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
mm, ll= Value :00H,00H - 7FH,7FH (-8192 - +8191)

■ Channel Mode Messages

● Reset All Controllers

Status	Second	Third
BnH	79H	00H

n= MIDI channel number : 0H - FH (ch.1 - ch.16)

● Local ON/OFF

Status	Second	Third
BnH	7AH	vvH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
vv= Value :00H,7FH (0 [OFF], 127 [ON])

● MONO

Status	Second	Third
BnH	7EH	mmH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
mm= Mono number :00H - 10H (0 - 16)

**Recognizes only All Notes Off.*

● POLY

Status	Second	Third
BnH	7FH	00H

n= MIDI channel number : 0H - FH (ch.1 - ch.16)

**Recognizes only All Notes Off.*

■ System Exclusive Messages

Status	Data
F0H	iiH, ddH,....., eeH
F7H	

F0H :System Exclusive
ii= ID number :00H - 7FH (0 - 127)
dd,....., ee= data :00H - 7FH (0 - 127)
F7H :EOX (End Of Exclusive / System Common)

■ System Common Messages

● Tune request

Status
F6H

1.2 Messages not stored in RECORD mode

■ Channel mode messages

● All Notes Off

Status	Second	Third
BnH	7BH	00H

n= MIDI channel number : 0H - FH (ch.1 - ch.16)

**When JV-50 receives this message, it produces and stores Note off messages for notes still on.*

● OMNI OFF

Status	Second	Third
BnH	7CH	00H

n= MIDI channel number : 0H - FH (ch.1 - ch.16)

**Recognizes only All Notes Off.*

● OMNI ON

Status	Second	Third
BnH	7DH	00H

n= MIDI channel number : 0H - FH (ch.1 - ch.16)

**Recognizes only All Notes Off.*

1.3 Recognized Sync Messages

Recognized when Clock Select(in the System Function) is set to MIDI or AUTO. If Clock Select is set to AUTO, and no system realtime messages (ie., start or continue commands) are received from an external device, pressing the JV-50's PLAY button will allow the unit to function as a Master (as if Clock Select was set to INTERNAL).
If, however, the JV-50 receives a Start or Continue command at MIDI IN, it will function as a Slave device (responding to the incoming timing clocks).

■ System Common Messages

● Song Position Pointer

Status	Second	Third
F2H	mmH	llH

mm, ll= Value :00H,00H - 7FH,7FH (0 - 16383)

**Recognized when JV-50 is in STOP or PAUSE mode.*
**When the JV-50 receives a Song Position Message, it will require a few seconds to locate the specified song position. Therefore, please wait a few seconds before sending a Continue message (by pressing PAUSE or PLAY).*

● Song select

Status	Second
F3H	ssH

ss= Value :00H - 62H (0 - 98)

**Recognized when JV-50 is in STOP or PAUSE mode.*

■ System Realtime Messages

● Timing clock

Status
F8H

● Start

Status
FAH

**Recognized when JV-50 is in STOP or PAUSE mode.*

● Continue
Status
FBH

*Recognized when JV-50 is in STOP or PAUSE mode.
*When Auto Rewind in System function is ON, playback will begin from the beginning of the song.

● Stop
Status
FCH

*Recognized when JV-50 is in PLAY or RECORD mode.
*When Auto Rewind in System function is ON, the playback will stop. Song position automaticalliy resets to the beginning of the song.

1.4 Recognized messages from remote controller

Recognized when Clock select is set to REMOTE.

■ System Common Messages

● Song position pointer

Status	Second	Third
F2H	mmH	llH

mm, ll= Value :00H,00H - 7FH,7FH (0 - 16383)

*Recognized when JV-50 is in STOP or PAUSE mode.
*When JV-50 receives a Song Position messages, it will require a few seconds to locate the specified song position. Therefore, please wait a few seconds before sending a Continue message (by pressing PAUSE or PLAY).

● Song Select

Status	Second
F3H	ssH

ss= Value :00H - 62H (0 - 98)

*Recognized when JV-50 is in STOP or PAUSE mode.

■ System Realtime Messages

● Start
Status
FAH

*Recognized when JV-50 is in STOP or PAUSE mode.

● Continue
Status
FBH

*Recognized when JV-50 is in STOP or PAUSE mode.
*When Auto Rewind in System function is ON, playback will begin from the beginning of the song.

● Stop
Status
FCH

*Recognized when JV-50 is in PLAY or RECORD mode.
*When Auto Rewind in System function is ON, the playback will stop. Song position automaticalliy resets to the beginning of the song.

1.5 Messages received for detecting trouble in MIDI connection

■ System Realtime Message

● Active sensing
Status
FEH

*Active sensing messages, monitor the integrity of MIDI connections. After the first Active sensing message has been received, the JV-50 expects to continue receiving these messages within 300 msec intervals. If the interval between messages exceeds 300 msec, the JV-50 will judge that there is a problem in the MIDI path (eg., a disconnected cable) and will transmit a Note Off message for all not es currently on. If the problem occurs while recording, the Note Off messages will be recorded. In the event of the such an occurence, monitoring of incoming messages will cause.

2. Transmitted Data (SMF player section : JV-50 only)

2.1 Transmitted messages in playback mode

The stored messages are transmitted when song data is playedback.

2.2 Transmitted messages which are received

Received messages are transmitted (except All Note Off : Channel Mode message).

■ System Common Messages

● Song Position Pointer

Status	Second	Third
F2H	mmH	llH

mm, ll= Value :00H,00H - 7FH,7FH (0 - 16383)

*Transmitted when Clock Select is MIDI , and Clock Out is ON in System function.

● Song Select

Status	Second
F3H	ssH

ss= Value :00H - 7FH (0 - 127)

*Transmitted when Clock Select is MIDI , and Clock Out is ON in System function.

■ System Realtime Messages

● Timing clock
Status
F8H

*Transmitted when Clock Select is MIDI or AUTO (synchronize to other devices), and Clock Out is ON in System function.

● Start
Status
FAH

*Transmitted when Clock Select is MIDI or AUTO, and Clock Out is ON in System function.

● Continue
Status
FBH

*Transmitted when Clock Select is MIDI or AUTO, and Clock Out is ON in System function.

● Stop
Status
FCH

*Transmitted when Clock Select is MIDI or AUTO (synchronize to other devices), and Clock Out is ON in System function.

2.3 Created message

■ Channel Mode Messages

● All Notes off

Status	Second	Third
BnH	7BH	00H

n= MIDI channel number : 0H - FH (ch.1 - ch.16)

*Transmitted when all notes are turned off in a specific channel and all note off transmit switch is set to ON.

● OMNI OFF

Status	Second	Third
BnH	7CH	vvH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
vv= Value :00H - 7FH (0 - 127)

*When JV-50 is turned on, these messages are transmitted on all channels (1-16).

● POLY

Status	Second	Third
BnH	7FH	vvH

n= MIDI channel number : 0H - FH (ch.1 - ch.16)
vv= Value :00H - 7FH (0 - 127)

*When JV-50 is turned on, these messages are transmitted on all channels(1-16).

■ System Realtime Message

● Active sensing
Status
FEH

*Transmitted but that Active Sensing set to OFF when JV-50 is turned on.

■ System Exclusive Message

Status	Data
F0H	iiH, ddH, ...,eeH
F7H	

F0H	:System Exclusive
ii = ID number	:00H - 7FH (0 - 127)
dd,...,ee = data	:00H - 7FH (0 - 127)
F7H	:EOX (End Of Exclusive/System Common)

2.4 Created messages for sync

■ System Common Messages

● Song Position Pointer

Status	Second	Third
F2H	mmH	llH

mm, ll= Value :00H,00H - 7FH,7FH (0 - 16383)

**Transmitted when Clock Select is INTERNAL, REMOTE or AUTO (as INTERNAL), and Clock Out is ON in System function.*

● Song Select

Status	Second
F3H	ssH

ss= Value :00H - 62H (0 - 98)

**Transmitted when Clock Select is INTERNAL, REMOTE or AUTO (as INTERNAL), and Clock Out is ON in System function.*

■ System Realtime Messages

● Timing clock

Status
F8H

**Transmitted when Clock Select is INTERNAL, REMOTE or AUTO (as INTERNAL), and Clock Out is ON in System function.*

● Start

Status
FAH

**Transmitted when Clock Select is INTERNAL, REMOTE or AUTO (as INTERNAL), and Clock Out is ON in System function.*

● Continue

Status
FBH

**Transmitted when Clock Select is INTERNAL, REMOTE or AUTO (as INTERNAL), and Clock Out is ON in System function.*

● Stop

Status
FCH

**Transmitted when Clock Select is INTERNAL, REMOTE or AUTO (as INTERNAL), and Clock Out is ON in System function.*

3. Receive data (Synthesizer section)

■ Channel Voice Messages

● Note off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n=MIDI channel number	: 0H - FH (ch.1 - ch.16)
kk=Note number	:00H - 7FH (0 - 127)
vv=Velocity	:00H - 7FH (0 - 127)

**In the drum part, recognized when "Rx.NOTE OFF = ON" for each instrument.*
**Velocity is ignored.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

● Note on

Status	Second	Third
9nH	kkH	vvH

n=MIDI channel number	: 0H - FH (ch.1 - ch.16)
kk=Note number	:00H - 7FH (0 - 127)
vv=Velocity	:01H - 7FH (1 - 127)

**Ignored when "Rx.NOTE MESSAGE = OFF".*
**In the drum part, ignored when "Rx.NOTE ON = OFF" for each instrument.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

● Polyphonic key pressure

Status	Second	Third
AnH	kkH	vvH

n=MIDI channel number	: 0H - FH (ch.1 - ch.16)
kk=Note number	:00H - 7FH (0 - 127)
vv=Value	:00H - 7FH (0 - 127)

**Ignored when "Rx.POLY PRESSURE (PAf) = OFF".*
**Effect to the parameter set on System Exclusive Messages. The default setting has no effect.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

● Control Change

**Ignores all control change messages (other than channel mode messages) when "Rx.CONTROL CHANGE = OFF".*
**The values set by Control change messages won't be reset by receiving new Program change messages.*

○ Bank select

Status	Second	Third
BnH	00H	mmH
BnH	20H	llH

n=MIDI channel number	:0H - FH (ch.1 - ch.16)
mm,ll=Bank number	:00 00H - 7F 7FH (bank.1 - bank.16384)
Default Value = 00 00H (bank.1)	

**Ignored when "Rx.BANK SELECT = OFF".*
"Rx.BANK SELECT" is set to OFF by "Turn General MIDI System On", and set to ON by "GS RESET". (Power-on default value is ON.)
**The LSB 7-bits are ignored (always regards as llH=00H) in JV-50/35. However, when sending Bank Select messages, you have to send both the MSB (mm) and LSB (ll) together.*
**"Bank select" is suspended until receiving "Program change". To select a Tone of another bank, you have to send a Bank select (mm,ll) before sending the Program change.*
**The "Variation number" of GS Format is defined as the decimal expression of the MSB value (Control change number 00H) of the Bank select.*

○ Modulation

Status	Second	Third
BnH	01H	vvH

n=MIDI channel number	: 0H - FH (ch.1 - ch.16)
vv=Modulation depth	:00H - 7FH (0 - 127)

**Ignored when "Rx.MODULATION = OFF".*
**Effect to the parameter set on System Exclusive Messages. The default setting is pitch modulation depth.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Portamento time

Status	Second	Third
BnH	05H	vvH

n=MIDI channel number	: 0H - FH (ch.1 - ch.16)
vv=Portamento time	:00H - 7FH (0 - 127)
	Default Value = 00H (0)

**The Portamento time value changes the rate of pitch change when Portamento is ON or when using portamento control messages. Value 0 is the fastest.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Data entry

Status	Second	Third
BnH	06H	mmH
BnH	26H	llH

n=MIDI channel number	:0H - FH (ch.1 - ch.16)
mm,ll=Value of the parameter specified with RPN and/or NRPN	

**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Volume

Status	Second	Third
BnH	07H	vvH

n=MIDI channel number	: 0H - FH (ch.1 - ch.16)
vv=Volume	:00H - 7FH (0 - 127)
	Default Value = 64H (100)

**Volume messages control the volume level of the specified channel (part). Use Volume messages to control volume balance of each part.*
**Ignored when "Rx.VOLUME = OFF".*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Panpot

Status	Second	Third
BnH	0AH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Panpot :00H - 40H - 7FH (0 - 64 - 127)
Default Value = 40H (64)

**127 steps from Left to Center to Right.*
**Within the Drum Part, the Panpot provides overall control of a stereophonic image.*
**Ignored when "Rx.PANPOT = OFF".*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Expression

Status	Second	Third
BnH	0BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Expression :00H - 7FH (0 - 127)
Default Value = 7FH (127)

**Expression and Volume messages are cumulative, and the result will control the overall volume.*
Use Expression messages for expression pedal, or creating expressive effects, such as crescendo, decrescendo, while playing.
**Ignored when "Rx.EXPRESSION = OFF".*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Hold1

Status	Second	Third
BnH	40H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control Value :00H - 7FH (0 - 127)
0-63=OFF 64-127=ON

**Ignored when "Rx.HOLD1 = OFF".*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Portamento

Status	Second	Third
BnH	41H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control Value :00H - 7FH (0 - 127)
0-63=OFF 64-127=ON

**Ignored when "Rx.PORTAMENTO = OFF".*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Sostenuto

Status	Second	Third
BnH	42H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control Value :00H - 7FH (0 - 127)
0-63=OFF 64-127=ON

**Ignored when "Rx.SOSTENUTO = OFF".*
Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.

○ Soft

Status	Second	Third
BnH	43H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control Value :00H - 7FH (0 - 127)
0-63=OFF 64-127=ON

**Ignored when "Rx.SOFT = OFF".*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Portamento Control

Status	Second	Third
BnH	54H	kkH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=source note number for pitch reference :00H - 7FH (0 - 127)

**When a Note On message is received after a Portamento Control message, the voice's pitch will glide from the pitch specified by the source note number of the Portamento Control message at the rate set by the portamento time controller (regardless portamento on/off.)*
If there is a currently sounding voice whose note number is coincident with the source note number, the voice's pitch will glide to the new Note On's pitch according to the portamento time without re-triggering (played in legato). Then no new voice should be assigned.
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

Example 1.

On MIDI	Description	Result
90 3C 40	Note on C4	C4 on
B0 54 3C	Portamento Control from C4	no change
90 40 40	Note on E4	Re-tuning (glide) from C4 to E4
80 3C 40	Note off C4	no change
80 40 40	Note off E4	E4 off

Example 2.

On MIDI	Description	Result
B0 54 3C	Portamento Control from C4	no change
90 40 40	Note on E4	E4 on with glide from C4
80 40 40	Note off E4	E4 off

○ Effect 1 depth (Reverb send level)

Status	Second	Third
BnH	5BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Reverb send level :00H - 7FH (0 - 127)
Default Value = 28H (40)

**Effect1 depth messages control the Send Level of the specified channel (part) to the internal Reverb unit.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ Effect 3 depth (Chorus send level)

Status	Second	Third
BnH	5DH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Chorus send level :00H - 7FH (0 - 127)
Default Value = 00H (0)

**Effect3 depth messages control the Send Level of the specified channel (part) to the internal Chorus unit.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

○ NRPN MSB/LSB

Status	Second	Third
BnH	63H	mmH
BnH	62H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm=MSB of the NRPN
ll=LSB of the NRPN

**Recognized when "Rx.NRPN = ON".*
**Rx.NRPN" is set to OFF by power-on reset or by receiving "Turn General MIDI System On", and it is set to ON by "GS RESET".*
**The values, which are set by NRPN, are reset by receiving new Program Change messages in User Tone.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

**** NRPN ****

An NRPN (Non Registered Parameter Number) is an expanded control change message.
Each function of an NRPN is described by the individual manufacturer.
To use NRPN, set NRPN number (MSB/LSB) before sending data. Then send data by Data entry message (Control Change # 6/38). And then, it is recommended to send RPN null (RPN number = 7FH/7FH) to prevent the data from being unexpectedly change.
You can change the following parameters using an NRPN.

NRPN MSB LSB	Data entry MSB	Description
01H 08H	mmH	Vibrato rate relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 09H	mmH	Vibrato depth relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 0AH	mmH	Vibrato delay relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 20H	mmH	TVF cutoff frequency relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 21H	mmH	TVF resonance relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 63H	mmH	TVF&TVA Env. Attack time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 64H	mmH	TVF&TVA Env. Decay time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 66H	mmH	TVF&TVA Env. Release time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
18H rrH	mmH	Pitch coarse of drum tone relative change on specified drum tone rr: key number of drum tone mm: 00H - 40H - 7FH (-64 - 0 - +63 semitone)
1AH rrH	mmH	TVA level of drum tone absolute change on specified drum tone rr: key number of drum tone mm: 00H - 7FH (zero - maximum)
1CH rrH	mmH	Panpot of drum tone absolute change on specified drum tone rr: key number of drum tone mm: 00H, 01H - 40H - 7FH (Random, Left-Center-Right)
1DH rrH	mmH	Reverb send level of drum tone absolute change on specified drum tone rr: key number of drum tone mm: 00H - 7FH (zero - maximum)
1EH rrH	mmH	Chorus send level of drum tone absolute change on specified drum tone rr: key number of drum tone mm: 00H - 7FH (zero - maximum)

**Data entry LSB is ignored.*
**The relative change means that the parameter value (e.g.-50 - 0 - +50) will be added to the preset value.*
**The absolute change means that the parameter value will be replaced by the received value.*

○RPN MSB/LSB

Status	Second	Third
BnH	65H	mmH
BnH	64H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm=MSB of the RPN
ll=LSB of the RPN

**Ignored when "Rx.RPN = OFF".*
**The values set by an RPN won't be reset by receiving new Program Change messages or Reset All Controllers.*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

**** RPN ****

An RPN (Registered Parameter Number) is an expanded control change message.
Each function of an RPN is described by the MIDI Standard.
To use an RPN, set the RPN number (MSB/LSB) before sending data. Then send data by Data entry message (Control Change # 6/38). It is then recommended to send RPN null (RPN number = 7FH/7FH) to prevent the data from being unexpectedly change.
JV-50/35 can receive Pitch bend sensitivity, Master fine tuning, Master coarse tuning and RPN null.

RPN MSB LSB	Data entry MSB LSB	Description
00H 00H	mmH ---	Pitch bend sensitivity mm: 00H - 18H (0 - 24 semitone) Default value = 02H (two semitones) ll: ignored (value=00H) (Up to 2 octaves)
00H 01H	mmH llH	Master fine tuning mm,ll: 00 00H - 40 00H - 7F 7FH (-8192 x 100/8192 - 0 - +8191 x 100/8192 cents)
00H 02H	mmH ---	Master coarse tuning mm: 28H - 40H - 58H (-24 - 0 - +24 semitones) ll: ignored (value=00H)
7FH 7FH	--- ---	RPN null Return to disable condition. The parameter already set retains its value. mm,ll: ignored

● Program Change

Status	Second
CnH	ppH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
pp=Program number :00H - 7FH (prog.1 - prog.128)

**The Tone of the voices already ON before receiving a program change message aren't affected.*
The Tone will be changed by a new Note-on message after the program change message is received.
**Ignored when "Rx.PROGRAM CHANGE = OFF".*
**In the drum part, Program change messages are ignored when the Bank is set at 129 - 16384 (ie. the value of the control change number 0 is not 00H).*

● Channel pressure

Status	Second
DnH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Value :00H - 7FH (0 - 127)

**Effect to the parameter set on System Exclusive Messages. The default setting has no effect.*
**Ignored when "Rx.CH PRESSURE (CAf) = OFF".*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

● Pitch bend change

Status	Second	Third
EnH	llH	mmH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm,ll=Value :00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

**Effect to the parameter set on System Exclusive Messages. The default setting is pitch bend.*
**Ignored when "Rx.PITCH BEND = OFF"*
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

■ Channel Mode Messages

● All sounds off

Status	Second	Third
BnH	78H	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**When "All sounds off" is received, all sounds on a specified channel turn off immediately.*
However, the state of channel messages does not change. You must not use "All sound off "message for "Note off".
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

● Reset all controllers

Status	Second	Third
BnH	79H	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**When "Reset all controllers" is received, the controller value of a specified channel returns to the default values as follows.*

Controller	Default Value
Pitch bend change	0 (Center)
Polyphonic key pressure	0 (off)
Channel pressure	0 (off)
Modulation	0 (off)
Expression	127 (maximum)
Hold1	0 (off)
Portamento	0 (off)
Sostenuto	0 (off)
Soft	0 (off)
RPN	disabled. The parameter already set retains its old value.
NRPN	disabled. The parameter already set retains its old value.

*Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.

● All notes off

Status	Second	Third
BnH	7BH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**When "All notes off" is received, all notes are turned off in the specified channel.*
However, sound continues while Hold1 or Sostenuto is on.
**Ignored when the MINUS ONE function is set to ON and the MIDI channel number of this message is the same as the selected part.*

● OMNI OFF

Status	Second	Third
BnH	7CH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**OMNI OFF is only recognized as "All notes off"; the Mode doesn't change.*

● OMNI ON

Status	Second	Third
BnH	7DH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**OMNI ON is only recognized as "All notes off"; the Mode doesn't change (OMNI OFF remains).*

● MONO

Status	Second	Third
BnH	7EH	mmH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm=number of mono :00H - 10H (0 - 16)

**MONO is recognized as "All sounds off". The specified channel turns to Mode4 (M=1), even if mm is not equal to 1 (mm is ignored).*

● POLY

Status	Second	Third
BnH	7FH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**POLY is recognized as "All sounds off". The specified channel turns to Mode 3.*

■ System Realtime Message

● Active sensing

Status
FEH

**Having received an "Active sensing" message, GS expects to receive additional active sensing messages at 300ms intervals. If the interval is greater than 420ms, GS executes "All sounds off", "All notes off" and "Reset all controllers" and returns to normal operation. (Monitoring of active sensing messages will terminate.)*

■ System Exclusive Message

Status	Data	Status
F0H	iiH, ddH, ...,eeH	F7H

F0H :System Exclusive
ii=ID number :The ID number identifies the manufacturer of a MIDI device that triggers an exclusive message. Value 7EH and 7FH are reserved to use as universal messages which are used for extension of the MIDI Standard.
41H : Roland's Manufacturer-ID.
7EH : Universal Non-Realtime Message
7FH : Universal Realtime Message
dd,...,ee=data :00H-7FH (0-127)
F7H :EOX (End of Exclusive/System common)

JV-50/35 can receive Mode change, Universal realtime system exclusive message, Request data 1 (RQ1) and Data set (DT1).

● System Exclusive Messages of Mode Change
System Exclusive Messages of Mode Change are the messages used to initialize the internal parameters of the device to General MIDI mode or GS default mode or change mode from GS or General MIDI to another mode. "GS reset" uses a form of Roland Exclusive Message. "Turn General MIDI System On" use a form of Universal Non-real Time Message.

○ GS reset

Status	Data Byte	Status
F0H	41H, dev, 42H, 12H, 40H, 00H, 7FH, 00H, 41H	F7H

Byte	Description
F0H	Exclusive status
41H	ID number (Roland)
dev	Device ID (dev: 00H-1FH (1-32) The default value is 10H (17).)
42H	Model ID (GS)
12H	Command ID (DT1)
40H	Address MSB
00H	:
7FH	Address LSB
00H	Data (GS reset)
41H	Checksum
F7H	EOX (End of exclusive)

*Upon receiving this message, all the internal parameters are set to the default settings of the GS Format. (Rx.NRPN SW will be turned OFF by this message.)
*Devices whose "Rx.GS Reset = OFF, or "Rx.Sys.Ex. = OFF won't recognize this message.
*It takes about 50ms to execute this message.

○ Turn General MIDI System On

Status	Data Byte	Status
F0H	7EH, 7FH, 09H, 01H	F7H

Byte	Description
F0H	Exclusive Status
7EH	ID number (Universal non-real time message)
7FH	ID of target device(Broadcast)
09H	sub-ID#1 (General MIDI message)
01H	sub-ID#2 (General MIDI On)
F7H	EOX (End of exclusive)

*Upon receiving this message, all the internal parameters are set to the default settings of General MIDI System Level 1. (Rx.NRPN SW will be turned OFF by this message.)
*Devices whose "Rx.GS Reset = OFF, or "Rx.Sys.Ex. = OFF won't recognize this message.
*It takes about 50ms to execute this message.

● Universal Realtime System Exclusive Message

○ Master Volume

Status	Data Byte	Status
F0H	7FH, 7FH, 04H, 01H, llH, mmH	F7H

Byte	Description
F0H	Exclusive status
7FH	ID number (Universal Realtime message)
7FH	ID of target device (Broadcast)
04H	sub-ID#1 (Device Control Message)
02H	sub-ID#2 (Master Volume)
mm,ll	Master Volume 00 00H - 7F 7FH (0 - 16383)
F7H	EOX (End of exclusive)

*The LSB (llH) is ignored (value=0).
*Devices whose "Rx.Sys.Ex." = OFF won't recognize this message.

● Data Transfer
JV-50/35 can transmit and receive the various parameters using System Exclusive messages of the following data format.
GS Common Exclusive messages use Model ID = 42H and Device ID = 17 (10H).
JV-50/35 have a unique Exclusive communication function which has it's own Model IDs in addition to the GS Common Exclusive messages.

○ Request data 1 RQ1 (11H)
This message is sent out to request the remote device to send back the required data.
It contains data for the address and size that specify designation and length, respectively.
On receiving a proper RQ1 message, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device will not send anything.

Status	Data Byte	Status
F0H	41H, dev, 42H, 11H, aaH, bbH, ccH, ssH, ttH, uuH, sum	F7H

Byte	Description
F0H	Exclusive status
41H	Manufacturer's ID (Roland)
dev	Device ID (dev: 00H-1FH(1-32) The default value is 10H(17).)
42H	Model ID (GS)
11H	Command ID (RQ1)
aaH	Address MSB
bbH	:
ccH	Address LSB
ssH	Size MSB
ttH	:
uuH	Size LSB
sum	Checksum
F7H	EOX (End of exclusive)

"JV-50/35 only recognizes the RQ1 messages whose address and size match the Parameter Address Map (Section 5).
"The error checking process uses a Checksum. Refer to Section 6 to calculate a Checksum.

○ Data set 1 DT1 (12H)
This message corresponds to the actual data transfer process.
On receiving a DT1 message, the device writes the data to internal memory according to the address.

Status	Data Byte	Status
F0H	41H, dev, 42H, 12H, aaH, bbH, ccH, ddH, ... eeH, sum	F7H

Byte	Description
F0H	Exclusive status
41H	Manufacturer's ID (Roland)
dev	Device ID (dev: 00H-1FH (1-32) The default value is 10H (17).)
42H	Model ID (GS)
12H	Command ID (DT1)
aaH	Address MSB
bbH	:
ccH	Address LSB
ddH	Data
:	:
eeH	Data
sum	Checksum
F7H	EOX (End of exclusive)

"JV-50/35 only recognize the DT1 messages whose address and size match the Parameter Address Map (Section 5).
"To send large DT1 messages at a time, insert 40ms - intervals at least in between each packet.
"The error checking process uses a Checksum. Refer to Section 6 to calculate a Checksum.

4. Transmit data (Synthesizer section)

■ Channel Voice Messages

The message is transmitted through the Tx Channel set in the MIDI Function. When set to PART transmission takes place on the MIDI receive channel set for the currently Part.

● Note off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=Note number :00H - 7FH (0 - 127)
vv=Velocity :00H - 7FH (0 - 127)

● Note on

Status	Second	Third
9nH	kkH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=Note number :00H - 7FH (0 - 127)
vv=Velocity :01H - 7FH (1 - 127)

● Control change

○ Bank select

Status	Second	Third
BnH	00H	mmH
BnH	20H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm,ll=Bank number :00 00H - 7F 7FH (bank.1 - bank.16384)

"This message is transmitted when tone change is made on the panel or "Send GS/GM Setup" is executed.

○ Modulation

Status	Second	Third
BnH	01H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Modulation depth :00H - 7FH (0 - 127)

"This message is transmitted when the Modulaton Lever is used.

○ Portamento time

Status	Second	Third
BnH	05H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Portamento time :00H - 7FH (0 - 127)

"The current setting value is transmitted when the Portamento button on the panel is turned on.

○ Data entry

Status	Second	Third
BnH	06H	mmH
BnH	26H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm,ll=Value of the parameter specified with RPN and/or NRPN

"This message is transmitted when tone change is made on the panel or "Send GS/GM Setup" is executed.

○ Volume

Status	Second	Third
BnH	07H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Volume :00H - 7FH (0 - 127)

"This message is transmitted when "Send GS/GM Setup" is executed.

○ Panpot

Status	Second	Third
BnH	0AH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Panpot :00H - 40H - 7FH (0 - 64 - 127)

"This message is transmitted when "Send GS/GM Setup" is executed.

○ Expression

Status	Second	Third
BnH	0BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Expression :00H - 7FH (0 - 127)

"This message is transmitted when the edit slider is operated with MIDI Control Mode.

○ Hold1

Status	Second	Third
BnH	40H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control Value :00H - 7FH (0 - 127) 0-63=OFF
64-127=ON

"This message is transmitted when the Hold Pedal is depressed.

○ Portamento

Status	Second	Third
BnH	41H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control Value :00H - 7FH (0 - 127) 0-63=OFF
64-127=ON

"This message is transmitted when the Portamento button is pressed.

○ Effect1 depth (Reverb send level)

Status	Second	Third
BnH	5BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Reverb send level :00H - 7FH (0 - 127)

"This message is transmitted when "Send GS/GM Setup" is executed.

❍Effect3 depth (Chorus send level)

Status	Second	Third
BnH	5DH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Chorus send level :00H - 7FH (0 - 127)

**This message is transmitted when "Send GS/GM Setup" is executed.*

❍NRPN MSB/LSB

Status	Second	Third
BnH	63H	mmH
BnH	62H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm=MSB of the NRPN
ll=LSB of the NRPN

**This message is transmitted when tone change is made on the panel or "Send GS/GM Setup" is executed.*

**** NRPN ****

JV-50/35 transmits NRPN with Bank select and Program change corresponding to the tone when tone change is made.
However, NRPN is not transmitted when "User Bank Selecct Tx = ON".

NRPN MSB LSB	Data entry MSB	Description
01H 08H	mmH	Vibrato rate relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 09H	mmH	Vibrato depth relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 0AH	mmH	Vibrato delay relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 20H	mmH	TVF cutoff frequency relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 21H	mmH	TVF resonance relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 63H	mmH	TVF&TVA Env. Attack time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 64H	mmH	TVF&TVA Env. Decay time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 66H	mmH	TVF&TVA Env. Release time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)

**Data entry LSB is ignored.*

❍RPN MSB/LSB

Status	Second	Third
BnH	65H	mmH
BnH	64H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm=MSB of the RPN
ll=LSB of the RPN

**This message is transmitted when tone change is made on the panel or "Send GS/GM Setup" is executed.*

**** RPN ****

JV-50/35 can transmit Pitch bend sensitivity and RPN null.

RPN MSB LSB	Data entry MSB LSB	Description
00H 00H	mmH ---	Pitch bend sensitivity mm: 00H - 18H (0 - 24 semitone)
7FH 7FH	--- ---	RPN null Return to disable condition.

❍Ext Control Number

Status	Second	Third
BnH	ccH	vvH

n=MIDI Channel number : 0H - FH (ch.1 - ch.16)
cc=Control number :00H - 09H, 0CH - 1FH, 40H - 5FH
vv=Control value :00H - 7FH (0 - 127)

**Control number can be assigned to the right one of the edit sliders when you select MIDI control mode.*

● Program change

Status	Second
CnH	ppH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
pp=Program number :00H - 7FH (prog.1 - prog.128)

**This message is transmitted when tone change is made on the panel or "Send GS/GM Setup" is executed.*

● Pitch bend change

Status	Second	Third
EnH	llH	mmH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm,ll=Value :00 00H - 40 00H - 7F 7FH
(-8192 - 0 - +8191)

**This message is transmitted when the Bender Lever is operated.*

■ Channel Mode Message

● Reset all controllers

Status	Second	Third
BnH	79H	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**This message is trasmitted when used to change part or MIDI receive channel.*

● All notes off

Status	Second	Third
BnH	7BH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**This message is trasmitted when used to change part or MIDI receive channel.*

● MONO

Status	Second	Third
BnH	7EH	01H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)

**This message is transmitted when the Solo/Portamento button on the panel is turned on.*

● POLY

Status	Second	Third
BnH	7FH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

**This message is transmitted when the Solo/Portamento button on the panel is turned on.*

■ System Realtime Message

● Active sensing

Status
FEH

**Transmit at about 250ms intervals.*

■ System Exclusive Message

● System Exclusive Messages of Mode Change

❍GS reset

Status	Data Byte	Status
F0H	41H, dev, 42H, 12H, 40H, 00H, 7FH, 00H, 41H	F7H

Byte	Description
F0H	Exclusive status
41H	ID number (Roland)
dev	Device ID (dev: 00H-1FH (1-32) The default value is 10H (17).)
42H	Model ID (GS)
12H	Command ID (DT1)
40H	Address MSB
00H	:
7FH	Address LSB
00H	Data (GS reset)
41H	Checksum
F7H	EOX (End of exclusive)

**This message is transmitted when "Send GS Setup" is executed.*

❍Turn General MIDI System On

Status	Data Byte	Status
F0H	7EH, 7FH, 09H, 01H	F7H

Byte	Description
F0H	Exclusive status
7EH	ID number (Universal non-real time message)
7FH	ID of target device(Broadcast)
09H	sub-ID#1 (General MIDI message)
01H	sub-ID#2 (General MIDI On)
F7H	EOX (End of exclusive)

**This message is transmitted when "Send GM Setup" is executed.*

● Data Transfer
JV-50/35 transmits the requested data when receiving a proper "Request data 1 (RQ1)" message.

○Data set1 DT1 (12H)

Status	Data Byte	Status
F0H	41H, dev, 42H, 12H, aaH, bbH, ccH, ddH, ... eeH, sum	F7H

Byte	Description
F0H	Exclusive status
41H	Manufacturer's ID (Roland)
dev	Device ID (dev: 00H-1FH (1-32) The default value is 10H (17).)
42H	Model ID (GS)
12H	Command ID (DT1)
aaH	Address MSB
bbH	:
ccH	Address LSB
ddH	Data
:	:
eeH	Data
sum	Checksum
F7H	EOX (End of exclusive)

**JV-50/35 only sends the DT1 messages whose address and size match the Parameter Address Map (Section 5).*
**If the amount of data to send is large (more than 128 bytes), then the data will be sent out in separate packets.*
**Refer to Section 6 to calculate a Checksum.*

5. Parameter address map

This map indicates address, size, Data (range), Parameter, Description, and Default Value of parameters which can be transferred using "Request data 1 (RQ1)" and "Data set 1 (DT1)".
All the numbers of address, size, Data, and Default Value are indicated in 7-bit Hexadecimal-form.

■ Address Block map

An outlined address map of the Exclusive Communication is shown below;

<Model ID = 4DH>

Address(H)	Block	Sub Block	Notes
20 00 00	Performance dump	Performance 1 Performance 2 Performance 3 : Performance 8	Bulk
28 00 00	Temporary		Bulk
30 00 00	User tone dump	User tone 1 User tone 2 User tone 3 : User tone 256	Bulk
38 00 00	User drum set dump	User drum 1 User drum 2 User drum 3 : User drum 9	Bulk
50 00 00	Exp performance dump	Exp perform 1 Exp perform 2 Exp perform 3 : Exp perform 8	Bulk
58 00 00	Exp temporary		Bulk
60 00 00	Exp user tone dump	Exp user tone 1 Exp user tone 2 Exp user tone 3 : Exp user tone 256	Bulk
68 00 00	Exp user drum dump	Exp user drum 1 Exp user drum 2 Exp user drum 3 : Exp user drum 8	Bulk

<Model ID = 42H>

Address(H)	Block	Sub Block	Notes
40 00 00	System parameters		Individual
40 01 00	Patch parameters	Patch common Patch block 0 : Patch block F	Individual
41 00 00	Drum setup parameters	Drum map name Drum tone parameters	Individual
48 00 00	Bulk dump	System parameters Patch common Patch block 0 :Patch block F	Bulk
49 00 00	Bulk dump (Drum setup parameters)	Drum tone parameters Drum map name	Bulk

There are two types of GS Exclusive message. One is an individual parameter communication, the other is a bulk dump communication.

■ Individual parameters

You can use individual parameter communication to send or request an individual parameter value.
One packet of System Exclusive messages "F0 ..... F7" can only have one parameter (which may contain several bytes).
You cannot use any address having "#" for the top address in a System Exclusive message.

<Model ID = 42H>

● System Parameters

Address(H)	Size(H)	Data(H)	Parameter	Description	Default Value (H)	Description
40 00 00	00 00 04	0018 - 07E8	MASTER TUNE	-100.0 - +100.0 [cent]	00 04 00 00	0 [cent]
40 00 01#				Use nibblized data.		
40 00 02#						
40 00 03#						
40 00 04	00 00 01	00 - 7F	MASTER VOLUME (= F0 7F 7F 04 01 00 vv F7)	0 - 127	7F	127
40 00 05	00 00 01	28 - 58	MASTER KEY-SHIFT	-24 - +24 [semitones]	40	0 [semitones]
40 00 06	00 00 01	01 - 7F	MASTER PAN	-63 (LEFT) - +63 (RIGHT)	40	0 (CENTER)
40 00 7F	00 00 01	00, 7F	MODE SET (Rx. only)	00 = GS Reset 127 = Exit GS mode		

Refer to "System Exclusive Messages of Mode Change" (Page 106)

● Patch Parameter

○ Common Parameter

Patch Common Parameters include VOICE RESERVE, REVERB, and CHORUS parameters. These parameters are common to all the parts.

Address(H)	Size(H)	Data(H)	Parameter	Description	Default Value (H)	Description
40 01 10	00 00 10	00 - 18	VOICE RESERVE	Part 10(Drum part)	02	2
40 01 11#				Part 1	06	6
40 01 12#				Part 2	02	2
40 01 13#				Part 3	02	2
40 01 14#				Part 4	02	2
40 01 15#				Part 5	02	2
40 01 16#				Part 6	02	2
40 01 17#				Part 7	02	2
40 01 18#				Part 8	02	2
40 01 19#				Part 9	02	2
40 01 1A#				Part 11	00	0
40 01 :#				:	:	:
40 01 1F#				Part 16	00	0

The sum total of voices in the voice reserve function must be equal to or less than the number of the maximum polyphony.
The maximum polyphony of the JV-50/35 is 28.
For compatibility with other GS models, it is recommended that the maximum polyphony be equal or less than 24.

40 01 30	00 00 01	00 - 07	REVERB MACRO	00: Room 1 01: Room 2 02: Room 3 03: Hall 1 04: Hall 2 05: Plate 06: Delay 07: Panning Delay	04	Hall 2
40 01 31	00 00 01	00 - 07	REVERB CHARACTER	0 - 7	04	4
40 01 32	00 00 01	00 - 07	REVERB PRE-LPF	0 - 7	00	0
40 01 33	00 00 01	00 - 7F	REVERB LEVEL	0 - 127	40	64
40 01 34	00 00 01	00 - 7F	REVERB TIME	0 - 127	40	64
40 01 35	00 00 01	00 - 7F	REVERB DELAY FEEDBACK	0 - 127	00	0
40 01 36	00 00 01	00 - 7F	REVERB SEND LEVEL TO CHORUS	0 - 127	00	0

REVERB MACRO is a parameter used to select the preset type of the effect.
When set to another REVERB MACRO, all other reverb parameters will be reset to the values set for each type of REVERB MACRO.

40 01 38	00 00 01	00 - 07	CHORUS MACRO	00: Chorus 1 01: Chorus 2 02: Chorus 3 03: Chorus 4 04: Feedback Chorus 05: Flanger 06: Short Delay 07: Short Delay(FB)	02	Chorus 3
40 01 39	00 00 01	00 - 07	CHORUS PRE-LPF	0 - 7	00	0
40 01 3A	00 00 01	00 - 7F	CHORUS LEVEL	0 - 127	40	64
40 01 3B	00 00 01	00 - 7F	CHORUS FEEDBACK	0 - 127	08	8
40 01 3C	00 00 01	00 - 7F	CHORUS DELAY	0 - 127	50	80
40 01 3D	00 00 01	00 - 7F	CHORUS RATE	0 - 127	03	3
40 01 3E	00 00 01	00 - 7F	CHORUS DEPTH	0 - 127	13	19
40 01 3F	00 00 01	00 - 7F	CHORUS SEND LEVEL TO REVERB	0 - 127	00	0

CHORUS MACRO is a parameter used to select the preset type of effect.
When set to another CHORUS MACRO, then all other chorus parameters will be reset to the values set for each type of CHORUS MACRO.

○Part Parameters
JV-50/35 has 16 parts. The parameters of each part are called Part Parameters.
To send or request Part Parameters, don't use not the part number (which is usually same as the MIDI channel number) but the BLOCK NUMBER in the message.

x...BLOCK NUMBER (0 - F),

Part 1 (default MIDIch = 1)	x=1
Part 2 (default MIDIch = 2)	x=2
:	:
Part 9 (default MIDIch = 9)	x=9
Part10 (default MIDIch =10)	x=0
Part11 (default MIDIch =11)	x=A
Part12 (default MIDIch =12)	x=B
:	:
Part16 (default MIDIch =16)	x=F

n...MIDI channel number (0 - F) of the BLOCK.

Address(H)	Size(H)	Data(H)	Parameter	Description	Default Value (H)	Description
40 1x 00	00 00 02	00 - 7F	TONE NUMBER	CC#00 VALUE 0 - 127	00	0
40 1x 01#	00 - 7F			P.C. VALUE 1 - 128	00	1
40 1x 02	00 00 01	00 - 10	Rx. CHANNEL	1 - 16, OFF	Same as the Part Number	
40 1x 03	00 00 01	00 - 01	Rx. PITCH BEND	OFF / ON	01	ON
40 1x 04	00 00 01	00 - 01	Rx. CH PRESSURE(CAf)	OFF / ON	01	ON
40 1x 05	00 00 01	00 - 01	Rx. PROGRAM CHANGE	OFF / ON	01	ON
40 1x 06	00 00 01	00 - 01	Rx. CONTROL CHANGE	OFF / ON	01	ON
40 1x 07	00 00 01	00 - 01	Rx. POLY PRESSURE(PAf)	OFF / ON	01	ON
40 1x 08	00 00 01	00 - 01	Rx. NOTE MESSAGE	OFF / ON	01	ON
40 1x 09	00 00 01	00 - 01	Rx. RPN	OFF / ON	01	ON
40 1x 0A	00 00 01	00 - 01	Rx. NRPN	OFF / ON	00(01*)	OFF (ON*)
	** Rx. NRPN is set to OFF by power-on reset or by "General MIDI mode On", and it is set to ON by "GS RESET".*					
40 1x 0B	00 00 01	00 - 01	Rx. MODULATION	OFF / ON	01	ON
40 1x 0C	00 00 01	00 - 01	Rx. VOLUME	OFF / ON	01	ON
40 1x 0D	00 00 01	00 - 01	Rx. PANPOT	OFF / ON	01	ON
40 1x 0E	00 00 01	00 - 01	Rx. EXPRESSION	OFF / ON	01	ON
40 1x 0F	00 00 01	00 - 01	Rx. HOLD1	OFF / ON	01	ON
40 1x 10	00 00 01	00 - 01	Rx. PORTAMENTO	OFF / ON	01	ON
40 1x 11	00 00 01	00 - 01	Rx. SOSTENUTO	OFF / ON	01	ON
40 1x 12	00 00 01	00 - 01	Rx. SOFT	OFF / ON	01	ON
40 1x 13	00 00 01	00 - 01	MONO/POLY MODE	Mono / Poly (=Bn 7E 01 / Bn 7F 00)	01	Poly
40 1x 14	00 00 01	00 - 02	ASSIGN MODE	0 = SINGLE 1 = LIMITED-MULTI 2 = FULL-MULTI	00 at x=0 01 at x≠0	SINGLE at x=0 LIMITED-MULTI at x≠0
	ASSIGN MODE is a parameter used to select the voice assign manner when "Multiple Note Ons" occur (the same note number on the same channel at the same time). The best assign modes (SINGLE (0) for the Drum part and LIMITED-MULTI (1) for the other parts) are selected automatically, so you need not reset this parameter.					
40 1x 15	00 00 01	00 - 02	USE FOR RHYTHM PART	0 = OFF 1 = MAP1 2 = MAP2	00 at x≠0 01 at x=00	OFF at x≠0 MAP1 at x=0
	USE FOR RHYTHM PART is a parameter to define the part to be used as an ordinary part (0), as a drum part using DRUM MAP1 (1), or a drum part using DRUM MAP2 (2). The default is MAP1 (1) for Part 10 (MIDI CH=10, x=0), and all other parts are set to ordinary parts (OFF(0)).					
40 1x 16	00 00 01	28 - 58	PITCH KEY SHIFT	-24 - +24 [semitones]	40	0 [semitones]
40 1x 17	00 00 02	08 - F8	PITCH OFFSET FINE	-12.0 - +12.0 [Hz]	08 00	0 [Hz]
40 1x 18#	Use nibblized data.					
40 1x 19	00 00 01	00 - 7F	PART LEVEL (=Bn 07 vv)	0 - 127	64	100
40 1x 1A	00 00 01	00 - 7F	VELOCITY SENSE DEPTH	0 - 127	40	64
40 1x 1B	00 00 01	00 - 7F	VELOCITY SENSE OFFSET	0 - 127	40	64
40 1x 1C	00 00 01	00 - 7F	PART PANPOT (=Bn 0A vv, except RANDOM)	-64(RANDOM), -63(LEFT) - +63(RIGHT)	40	0 (CENTER)
40 1x 1D	00 00 01	00 - 7F	KEY RANGE LOW	(C-1) - (G9)	00	C-1
40 1x 1E	00 00 01	00 - 7F	KEY RANGE HIGH	(C-1) - (G9)	7F	G 9
40 1x 1F	00 00 01	00 - 5F	CC1 CONTROLLER NUMBER	0 - 95	10	16
40 1x 20	00 00 01	00 - 5F	CC2 CONTROLLER NUMBER	0 - 95	11	17
40 1x 21	00 00 01	00 - 7F	CHORUS SEND LEVEL (=Bn 5D vv)	0 - 127	00	0
40 1x 22	00 00 01	00 - 7F	REVERB SEND LEVEL (=Bn 5B vv)	0 - 127	28	40
40 1x 23	00 00 01	00 - 01	Rx.BANK SELECT	OFF / ON	01(00*)	ON(OFF*)
	**Rx. BANK SELECT is set to ON by power-on reset or by "GS RESET", and set to OFF by "Turn General MIDI System On".*					

Address(H)	Size(H)	Data(H)	Parameter	Description	Default Value (H)	Description
40 1x 30	00 00 01	0E - 72	TONE MODIFY 1 Vibrato rate (=Bn 63 01 62 08 06 vv)	-50 - +50	40	0
40 1x 31	00 00 01	0E - 72	TONE MODIFY 2 Vibrato depth (=Bn 63 01 62 09 06 vv)	-50 - +50	40	0
40 1x 32	00 00 01	0E - 72	TONE MODIFY 3 TVF cutoff freq. (=Bn 63 01 62 20 06 vv)	-50 - +50	40	0
40 1x 33	00 00 01	0E - 72	TONE MODIFY 4 TVF resonance (=Bn 63 01 62 21 06 vv)	-50 - +50	40	0
40 1x 34	00 00 01	0E - 72	TONE MODIFY 5 TVF&TVA Env.attack (=Bn 63 01 62 63 06 vv)	-50 - +50	40	0
40 1x 35	00 00 01	0E - 72	TONE MODIFY 6 TVF&TVA Env.decay (=Bn 63 01 62 64 06 vv)	-50 - +50	40	0
40 1x 36	00 00 01	0E - 72	TONE MODIFY 7 TVF&TVA Env.release (=Bn 63 01 62 66 06 vv)	-50 - +50	40	0
40 1x 37	00 00 01	0E - 72	TONE MODIFY 8 Vibrato delay (=Bn 63 01 62 0A 06 vv)	-50 - +50	40	0
40 1x 40	00 00 0C	00 - 7F	SCALE TUNING C	-64 - +63 [cent]	40	0 [cent]
40 1x 41#		00 - 7F	SCALE TUNING C#	-64 - +63 [cent]	40	0 [cent]
40 1x 42#		00 - 7F	SCALE TUNING D	-64 - +63 [cent]	40	0 [cent]
40 1x 43#		00 - 7F	SCALE TUNING D#	-64 - +63 [cent]	40	0 [cent]
40 1x 44#		00 - 7F	SCALE TUNING E	-64 - +63 [cent]	40	0 [cent]
40 1x 45#		00 - 7F	SCALE TUNING F	-64 - +63 [cent]	40	0 [cent]
40 1x 46#		00 - 7F	SCALE TUNING F#	-64 - +63 [cent]	40	0 [cent]
40 1x 47#		00 - 7F	SCALE TUNING G	-64 - +63 [cent]	40	0 [cent]
40 1x 48#		00 - 7F	SCALE TUNING G#	-64 - +63 [cent]	40	0 [cent]
40 1x 49#		00 - 7F	SCALE TUNING A	-64 - +63 [cent]	40	0 [cent]
40 1x 4A#		00 - 7F	SCALE TUNING A#	-64 - +63 [cent]	40	0 [cent]
40 1x 4B#		00 - 7F	SCALE TUNING B	-64 - +63 [cent]	40	0 [cent]
	SCALE TUNING enables you to slightly raise or lower each note in the same octave range. This setting can be enabled for all pitches of the same note name. ±0 cent (40H) is equivalent to "Equal Tempelament."					
40 2x 00	00 00 01	28 - 58	MOD PITCH CONTROL	-24 - +24 [semitones]	40	0 [semitones]
40 2x 01	00 00 01	00 - 7F	MOD TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 02	00 00 01	00 - 7F	MOD AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 03	00 00 01	00 - 7F	MOD LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 04	00 00 01	00 - 7F	MOD LFO1 PITCH DEPTH	0 - 600 [cent]	0A	47 [cent]
40 2x 05	00 00 01	00 - 7F	MOD LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 06	00 00 01	00 - 7F	MOD LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 07	00 00 01	00 - 7F	MOD LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 08	00 00 01	00 - 7F	MOD LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 09	00 00 01	00 - 7F	MOD LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 0A	00 00 01	00 - 7F	MOD LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 10	00 00 01	40 - 58	BEND PITCH CONTROL	0 - 24 [semitones]	42	2 [semitones]
40 2x 11	00 00 01	00 - 7F	BEND TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 12	00 00 01	00 - 7F	BEND AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 13	00 00 01	00 - 7F	BEND LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 14	00 00 01	00 - 7F	BEND LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 15	00 00 01	00 - 7F	BEND LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 16	00 00 01	00 - 7F	BEND LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 17	00 00 01	00 - 7F	BEND LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 18	00 00 01	00 - 7F	BEND LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 19	00 00 01	00 - 7F	BEND LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 1A	00 00 01	00 - 7F	BEND LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 20	00 00 01	28 - 58	CAf PITCH CONTROL	-24 - +24 [semitones]	40	0 [semitones]
40 2x 21	00 00 01	00 - 7F	CAf TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 22	00 00 01	00 - 7F	CAf AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 23	00 00 01	00 - 7F	CAf LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 24	00 00 01	00 - 7F	CAf LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 25	00 00 01	00 - 7F	CAf LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 26	00 00 01	00 - 7F	CAf LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 27	00 00 01	00 - 7F	CAf LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 28	00 00 01	00 - 7F	CAf LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 29	00 00 01	00 - 7F	CAf LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 2A	00 00 01	00 - 7F	CAf LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 30	00 00 01	28 - 58	PAf PITCH CONTROL	-24 - +24 [semitones]	40	0 [semitones]
40 2x 31	00 00 01	00 - 7F	PAf TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 32	00 00 01	00 - 7F	PAf AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 33	00 00 01	00 - 7F	PAf LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 34	00 00 01	00 - 7F	PAf LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 35	00 00 01	00 - 7F	PAf LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 36	00 00 01	00 - 7F	PAf LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 37	00 00 01	00 - 7F	PAf LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 38	00 00 01	00 - 7F	PAf LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 39	00 00 01	00 - 7F	PAf LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 3A	00 00 01	00 - 7F	PAf LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]

Address(H)	Size(H)	Data(H)	Parameter	Description	Default Value (H)	Description
40 2x 40	00 00 01	28 - 58	CC1 PITCH CONTROL	-24 - +24 [semitones]	40	0 [semitones]
40 2x 41	00 00 01	00 - 7F	CC1 TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 42	00 00 01	00 - 7F	CC1 AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 43	00 00 01	00 - 7F	CC1 LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 44	00 00 01	00 - 7F	CC1 LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 45	00 00 01	00 - 7F	CC1 LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 46	00 00 01	00 - 7F	CC1 LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 47	00 00 01	00 - 7F	CC1 LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 48	00 00 01	00 - 7F	CC1 LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 49	00 00 01	00 - 7F	CC1 LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 4A	00 00 01	00 - 7F	CC1 LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 50	00 00 01	28 - 58	CC2 PITCH CONTROL	-24 - +24 [semitones]	40	0 [semitones]
40 2x 51	00 00 01	00 - 7F	CC2 TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 52	00 00 01	00 - 7F	CC2 AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 53	00 00 01	00 - 7F	CC2 LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 54	00 00 01	00 - 7F	CC2 LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 55	00 00 01	00 - 7F	CC2 LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 56	00 00 01	00 - 7F	CC2 LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 57	00 00 01	00 - 7F	CC2 LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 58	00 00 01	00 - 7F	CC2 LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 59	00 00 01	00 - 7F	CC2 LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 5A	00 00 01	00 - 7F	CC2 LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]

● Drum Setup Parameters

m:Map number (0 = MAP1, 1 = MAP2)
rr:drum part note number (00H - 7FH)

Address(H)	Size(H)	Data(H)	Parameter	Description
41 m0 00 : # 41 m0 0B#	00 00 0C	20 - 7F	DRUM MAP NAME	ASCII Character
41 m1 rr	00 00 01	00 - 7F	PLAY NOTE NUMBER	Pitch coarse
41 m2 rr	00 00 01	00 - 7F	LEVEL (=Bn 63 1A 62 rr 06 vv)	TVA level
41 m3 rr	00 00 01	00 - 7F	ASSIGN GROUP NUMBER	Non, 1 - 127
41 m4 rr	00 00 01	00 - 7F	PANPOT (=Bn 63 1C 62 rr 06 vv, except RANDOM)	-64(RANDOM), -63(LEFT) - +63(RIGHT)
41 m5 rr	00 00 01	00 - 7F	REVERB SEND LEVEL Multiplicand of the part reverb level (=Bn 63 1D 62 rr 06 vv)	0.0 - 1.0
41 m6 rr	00 00 01	00 - 7F	CHORUS SEND LEVEL Multiplicand of the part chorus level (=Bn 63 1E 62 rr 06 vv)	0.0 - 1.0
41 m7 rr	00 00 01	00 - 01	Rx. NOTE OFF	OFF / ON
41 m8 rr	00 00 01	00 - 01	Rx. NOTE ON	OFF / ON
	When you change Drum Sets, all values of the DRUM SETUP PARAMETERS will be initialized.			

■ Bulk Dump

You can send or request bulk data which contains a large amount of parameter data using Bulk Dump communication.
A Bulk Dump is used for storing data in a sequencer or a computer.
To send or request bulk data, use the Address and Size indicated in the following map.
When you request bulk data, cannot use any address having "#" for the top address in a System Exclusive message.
Messages which include large amount of data (more than 128 bytes) are sent out in separate packets.
In this case, the subsequent packets may contain the address marked "#."
To send several packets of large DT1 messages at a time, insert intervals of at least 40ms. in between those packets.

<Model ID = 4DH>

● Performance Parameters

Address(H)	Size(H)	Description	Number of packets
20 00 00 : # 20 22 1F#	00 22 20	PERFORMANCE ALL	35 packets

Address(H)	Size(H)	Description	Number of packets
20 00 00 : # 20 04 23#	00 04 24	PERFORMANCE 1	5 packets
20 04 24 : # 20 08 47#	00 04 24	PERFORMANCE 2	5 packets
20 08 48 : # 20 0C 6B#	00 04 24	PERFORMANCE 3	5 packets
20 0C 6C : # 20 11 0F#	00 04 24	PERFORMANCE 4	5 packets
20 11 10 : # 20 15 33#	00 04 24	PERFORMANCE 5	5 packets
20 15 34 : # 20 19 57#	00 04 24	PERFORMANCE 6	5 packets
20 19 58 : # 20 1D 7B#	00 04 24	PERFORMANCE 7	5 packets
20 1D 7C : # 20 22 1F#	00 04 24	PERFORMANCE 8	5 packets

● Temporary Parameters

Address(H)	Size(H)	Description	Number of packets
28 00 00 : # 28 04 23#	00 04 24	TEMPORARY	5 packets

● User Tone Parameters

Address(H)	Size(H)	Description	Number of packets
30 00 00 : # 30 27 7F#	00 28 00	USER TONE ALL	40 packets

● User Drum Parameters

Address(H)	Size(H)	Description	Number of packets
38 00 00 : # 38 47 7F#	00 48 00	USER DRUM ALL	72 packets

Address(H)	Size(H)	Description	Number of packets
38 00 00 : # 38 07 7F#	00 08 00	USER DRUM 1	8 packets
38 08 00 : # 38 0F 7F#	00 08 00	USER DRUM 2	8 packets
38 10 00 : # 38 17 7F#	00 08 00	USER DRUM 3	8 packets
38 18 00 : # 38 1F 7F#	00 08 00	USER DRUM 4	8 packets
38 20 00 : # 38 27 7F#	00 08 00	USER DRUM 5	8 packets
38 28 00 : # 38 2F 7F#	00 08 00	USER DRUM 6	8 packets
38 30 00 : # 38 37 7F#	00 08 00	USER DRUM 7	8 packets
38 38 00 : # 38 3F 7F#	00 08 00	USER DRUM 8	8 packets
38 40 00 : # 38 47 7F#	00 08 00	USER DRUM 9	8 packets

● Performance Parameters (Only use when installing VE-JV1)

Address(H)	Size(H)	Description	Number of packets
50 00 00 : # 50 2E 1F#	00 2E 20	EXP PERFORMANCE ALL	47 packets

Address(H)	Size(H)	Description	Number of packets
50 00 00 : # 50 05 63#	00 05 64	EXP PERFORMANCE 1	5 packets
50 05 64 : # 50 0A C7#	00 05 64	EXP PERFORMANCE 2	5 packets
50 0A C8 : # 50 10 2B#	00 05 64	EXP PERFORMANCE 3	5 packets
50 10 2C : # 50 15 8F#	00 05 64	EXP PERFORMANCE 4	5 packets
50 15 90 : # 50 1A F3#	00 05 64	EXP PERFORMANCE 5	5 packets
50 1A F4 : # 50 20 57#	00 05 64	EXP PERFORMANCE 6	5 packets
50 20 58 : # 50 25 BB#	00 05 64	EXP PERFORMANCE 7	5 packets
50 25 BC : # 50 2B 1F#	00 05 64	EXP PERFORMANCE 8	5 packets

● Temporary parameters (Only use when installing VE-JV1)

Address(H)	Size(H)	Description	Number of packets
58 00 00 : # 58 05 63#	00 05 64	EXP TEMPORARY	5 packets

● User Tone Parameters (Only use when installing VE-JV1)

Address(H)	Size(H)	Description	Number of packets
60 00 00 : # 60 27 7F#	00 28 00	EXP USER TONE ALL	40 packets

● User Drum Parameters (Only use when installing VE-JV1)

Address(H)	Size(H)	Description	Number of packets
68 00 00 : 68 3F 7F#	00 40 00	EXP USER DRUM ALL	64 packets

Address(H)	Size(H)	Description	Number of packets
68 00 00 : 68 07 7F#	00 08 00	EXP USER DRUM 1	8 packets
68 08 00 : 68 0F 7F#	00 08 00	EXP USER DRUM 2	8 packets
68 10 00 : 68 17 7F#	00 08 00	EXP USER DRUM 3	8 packets
68 18 00 : 68 1F 7F#	00 08 00	EXP USER DRUM 4	8 packets
68 20 00 : 68 27 7F#	00 08 00	EXP USER DRUM 5	8 packets
68 28 00 : 68 2F 7F#	00 08 00	EXP USER DRUM 6	8 packets
68 30 00 : 68 37 7F#	00 08 00	EXP USER DRUM 7	8 packets
8 68 00 : 68 3F 7F#	00 08 00	EXP USER DRUM 8	8 packets

<Model ID = 42H>

● All Parameters (System Parameters and all Patch Parameters)

Address(H)	Size(H)	Description	Number of packets
48 00 00 : 48 1D 0F#	00 1D 10	ALL	30 packets

● System Parameters

Address(H)	Size(H)	Description	Number of packets
48 00 00 : 48 00 0F#	00 00 10	SYSTEM PARAMETERS	1 packet

● Patch Parameters

Address(H)	Size(H)	Description	Number of packets
48 00 10 : 48 01 0F#	00 01 00	PATCH COMMON	1 packet
48 01 10 : 48 02 6F#	00 01 60	BLOCK 0	2 packets
48 02 70 : 48 04 4F#	00 01 60	BLOCK 1	2 packets
48 04 50 : 48 06 2F#	00 01 60	BLOCK 2	2 packets
48 06 30 : 48 08 0F#	00 01 60	BLOCK 3	2 packets
48 08 10 : 48 09 6F#	00 01 60	BLOCK 4	2 packets
48 09 70 : 48 0B 4F#	00 01 60	BLOCK 5	2 packets
48 0B 50 : 48 0D 2F#	00 01 60	BLOCK 6	2 packets
48 0D 30 : 48 0F 0F#	00 01 60	BLOCK 7	2 packets
48 0F 10 : 48 10 6F#	00 01 60	BLOCK 8	2 packets
48 10 70 : 48 12 4F#	00 01 60	BLOCK 9	2 packets
48 12 50 : 48 14 2F#	00 01 60	BLOCK A	2 packets
48 14 30 : 48 16 0F#	00 01 60	BLOCK B	2 packets
48 16 10 : 48 17 6F#	00 01 60	BLOCK C	2 packets
48 17 70 : 48 19 4F#	00 01 60	BLOCK D	2 packets
48 19 50 : 48 1B 2F#	00 01 60	BLOCK E	2 packets
48 1B 30 : 48 1D 0F#	00 01 60	BLOCK F	2 packets

● Drum Setup Parameters

m:Map number (0 = MAP1, 1 = MAP2)

Address(H)	Size(H)	Description	Number of packets
49 m0 00 : 49 m1 7F	00 02 00	PLAY NOTE NUMBER	2 packets
49 m2 00 : 49 m3 7F	00 02 00	LEVEL	2 packets
49 m4 00 : 49 m5 7F	00 02 00	ASSIGN GROUP NUMBER	2 packets
49 m6 00 : 49 m7 7F	00 02 00	PANPOT	2 packets
49 m8 00 : 49 m9 7F	00 02 00	REVERB SEND LEVEL	2 packets
49 mA 00 : 49 mB 7F	00 02 00	CHORUS SEND LEVEL	2 packets
49 mC 00 : 49 mD 7F	00 02 00	Rx. NOTE ON/OFF	2 packets
49 mE 00 : 49 mE 17	00 00 18	DRUM MAP NAME	1 packet

6. Useful Information

● Decimal and Hexadecimal

It is common to use 7-bit Hexadecimal numbers in MIDI communication. The following is a conversion table between decimal numbers and 7-bit Hexadecimal numbers.

Dec.	Hex.	Dec.	Hex.	Dec.	Hex.	Dec.	Hex.
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	69	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

**To indicate a decimal number for the MIDI channel, Bank number, and Program number, add one to the values in the table.*
**The resolution of 7-bit Hexadecimal numbers is 128. Use several bytes for values which require higher resolution.*
i.e. The number "aa bbH" in 7-bit Hexadecimal is "aa x 128 + bb" in Decimal form.
**A signed number (with a sign +/-) is indicated as 00H = -64, 40H = 0, 7FH = +63.*
So the signed number "aaH" in 7-bit Hexadecimal is "aa - 64" in Decimal form.
In the case of two bytes, it is regarded as 00 00H = -8192, 40 00H = 0, 7F 7FH = +8191.
So the signed number "aa bbH" in 7-bit Hexadecimal is "aa bbH - 40 00H = (aa x 128 + bb) - (64 x 128)" in Decimal form.
**The data indicated as "nibbled" is a 4-bit Hexadecimal number.*
i.e. "0a 0bH" is "a x 16 + b".

<Example 1> Convert "5AH" in Hexadecimal to a Decimal number.
(By using the table) 5AH = 90

<Example 2> Convert "12 34H" in 7-bit Hexadecimal to a Decimal number.
(By using the table) 12H = 18, 34H = 52
So, 18 x 128 + 52 = 2356

<Example 3> Convert "0A 03 09 0D" in nibblized form to a Decimal number.
(By using the table) 0AH = 10, 03H = 3, 09H = 9, 0DH = 13
So, ((10 x 16 + 3) x 16 + 9) x 16 + 13 = 41885

<Example 4> Convert "1258" in decimal form to a nibblized number.

16) 1258
16) 78...10
16) 4...14
0...4

(By using the table) 0=00H, 4=04H, 14=0EH, 10=0AH
So, 00 04 0E 0AH

● Example of actual MIDI messages

<Example 1> 92 3E 5F

"9n" is a status of a Note On message, and "n" is a MIDI channel number.
The second byte is the Note number, and the third is Velocity.
2H = 2, 3EH = 62, 5FH = 95
So, this is a Note On message of MIDI channel=3, Note number=62 (D4) and Velocity=95.

<Example 2> CE 49

"Cn" is a status of a Program change message, and "n" is a MIDI channel number.
The second byte is a Program number
EH = 14, 49H = 73
So, this is a Program change message of MIDI channel=15, Program number= 74 (Flute in GS).

<Example 3> EA 00 28

"EnH" is a status of a Pitch bend change message, and "n" is a MIDI channel number.
The second byte (00H) is an LSB and the third (28H) is an MSB of a Pitch bend value.
The Pitch bend value is :
28 00H - 40 00H = 40 x 128 + 0 - (64 x 128 + 0) = 5120 - 8192 = -3072
So, this is a Pitch bend change message of MIDI channel=11, Pitch bend value = -3072

If the Pitch bend sensitivity is set to 2 semitones, and the Pitch bend value - 8192 (00 00H) is defined as -200 cents,
The actual pitch bend value of this message is :
-200 x (-3072) ÷ (-8192) = -75 cent

<Example 4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F

"Bn" is a status of a Control change message, and "n" is a MIDI channel number.
The second byte is a Control number and the third is the value.
This packet uses the running status rule, that is, when you send a series of messages with the same status, you can omit the following status bytes.
This message contains :

B3 64 00	MIDI CH = 4	LSB of RPN parameter number	: 00H
(B3) 65 00	MIDI CH = 4	MSB of RPN parameter number	: 00H
(B3) 06 0C	MIDI CH = 4	MSB of Data entry	: 0CH
(B3) 26 00	MIDI CH = 4	LSB of Data entry	: 00H
(B3) 64 7F	MIDI CH = 4	LSB of RPN parameter number	: 7FH
(B3) 65 7F	MIDI CH = 4	MSB of RPN parameter number	: 7FH

This message string means 'send data "0C 00H" to RPN parameter number"00 00H", after that, set RPN parameter number to "7F 7F"'.

RPN parameter number "00 00H" is Pitch bend sensitivity and the unit of the MSB value is a semitone, so 0CH = 12 is a value to set the Pitch bend sensitivity = 12 semitones (one octave).
GS devices ignore the LSB value of Pitch bend sensitivity. However, you had better send both MSB and LSB (=00H) to maintain data compatibility.

Once an RPN or NRPN number is set, all the Data entry messages sent after are effective.
Sometimes this rule may cause a problem if the MIDI data is played by a sequencer and it is operated in fast forward or backward made. It is recommended, therefore, to set the RPN or NRPN number to 7F 7FH after sending the Data entry messages.

**To use running-status for several MIDI events like <example 4> in song data (e.g. Standard MIDI File data) is not recommended.*
There may be a sequencer which can not handle such data correctly when it is operated in fast forward or rewind mode.
Entering a status byte for every event is the reliable way.
**The parameter number and the value of RPN or NRPN must be sent in correct order.*

As some sequencers may send those recorded data in a different order (if an event is too close to another), it is recommended to place each event on a different tick.
(e.g. 1 tick deviation for TPQN=96, or 5 ticks for TPQN=480 is recommended.)

● **Example of Roland System Exclusive messages and Checksum**

Roland System Exclusive messages (RQ1 and DT1) have a Checksum at the end of the data (just before EOX) to be able to check for communication errors.
The Checksum is determined by values of address and data (or size) included in the message.

<How to calculate Checksums> ("H" indicates Hexadecimal.)

The error checking process employs a sum-check error detection. It provides binary bit figures whose lower 7 bits are zero when values for an address, data (or size) and the Checksum are summed.

One practical equation to determine Checksum is;
If the address is "ad bb ccH" and the data (or the size) is "dd ee ffH"

ad + bb + cc + dd + ee + ff = sum
sum ÷ 128 = quotient ... remainder
128 - remainder = checksum

<Example 1> Set "REVERB MACRO" to "ROOM 3"

According to the Parameter Address Map, the Address of REVERB MACRO is 40 01 30H, and the Value corresponding to ROOM 3 is 02H. So, the message should be :

F0	41	10	42	12	40 01 30	02	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive Status
(4) Model ID (GS)
(2) ID (Roland)
(5) Command ID (DT1)
(1)(2)(3)(4)(5) address data checksum
(6)(3) Device ID
(16)(6) End of Exclusive

The Checksum is :
40H + 01H + 30H + 02H = 64 + 1 + 48 + 2 = 115 (sum)
115 (sum) ÷ 128 = 0 (quotient)...115 (remainder)
checksum = 128 - 115 (remainder) = 13 = 0DH

Therefore, the message to send is : F0 41 10 42 12 40 01 30 02 0D F7

<Example 2> To request LEVEL of NOTE NUMBER 75 (D#5; Claves) in DRUM MAP 1

NOTE NUMBER 75 (D#5) is 4BH in Hexadecimal.
The Address of "LEVEL of NOTE NUMBER 75 (D#5; Claves) in DRUM MAP 1" is 41 02 4BH, and the size is 00 00 01H. So, the message should be :

F0	41	10	42	11	41 02 4B	00 00 01	??	F7
(1)	(2)	(3)	(4)	(5)	address	size	checksum	(6)

(1) Exclusive Status
(4) Model ID (GS)
(2) ID (Roland)
(5) Command ID (RQ1)
(1)(2)(3)(4)(5) address size checksum
(6)(3) Device ID
(16)(6) End of Exclusive

The Checksum is :
41H + 02H + 4BH + 00H + 00H + 01H = 65 + 2 + 75 + 0 + 0 + 1 = 143 (sum)
143 (sum) – 128 = 1 (quotient)...15 (remainder)
checksum = 128 - 15 (remainder) = 113 = 71H

Therefore, the message to send is :
F0 41 10 42 11 41 02 4B 00 00 01 71 F7

<Example 3> Set "MASTER TUNE" to +23.4 cents by System Exclusive

The Address of "MASTER TUNE" is 40 00 00H. The Value should be nibblized data whose resolution is 0.1 cents, and which is a signed value (00 04 00 00H (= 1024) = 0).
+23.4[cents] = 234 + 1024 = 1258 = 04 EAH = 00 04 0E 0AH (nibblized)
So, the message should be :

F0	41	10	42	12	40 00 00	00 04 0E 0A	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive Status
(4) Model ID (GS)
(2) ID (Roland)
(5) Command ID (DT1)
(1)(2)(3)(4)(5) address data checksum
(6)(3) Device ID
(16)(6) End of Exclusive

The Checksum is :
40H + 00H + 00H + 00H + 04H + 0EH + 0AH = 64 + 0 + 0 + 0 + 4 + 14 + 10 = 92 (sum)
92 (sum) ÷ 128 = 0 (quotient)...92 (remainder)
checksum = 128 - 92 (remainder) = 36 = 24H

Therefore, the message to send is : F0 41 10 42 12 40 00 00 00 04 0E 0A 24 F7

EXPANDABLE SYNTHESIZER
Model JV-50
Synthesizer section

MIDI Implementation Chart

Date : Oct. 15 1993
Version : 1.00

Function•••		Transmitted	Recognized	Remarks
Basic	Default	1—16	1—16	
Channel	Changed	1—16	1—16	Memorized
Mode	Default	Mode 3	Mode 3	
	Messages	MONO, POLY	Mode 3, 4 (M=1)	*2 Operating
	Altered	******		
Note		0—120	0—127	
Number	True Voice	******	0—127	
Velocity	Note ON	O	O	
	Note OFF	X	X	
After	Key's	X	O *1	
Touch	Ch's	X	O *1	
Pitch Bend		O	O *1	
Control Change	0—9, 12—31, 64—95	O (assignable)	O *1	
	0, 32	O	O *1	Bank select
	1	O	O *1	Modulation
	5	O	O *1	Portamento time
	6, 38	O (MSB only)	O *1	Data entry
	7	O	O *1	Volume
	10	O	O *1	Panopt
	11	O	O *1	Expression
	64	O	O *1	Hold1
	65	O	O *1	Portamento
	66	O	O *1	Sostenuto
	67	O	O *1	Soft
	84	O	O *1	Legato control
	91	O	O (Reverb) *1	Effect1 depth
	93	O	O (Chorus) *1	Effect3 depth
	98, 99	O	O *1	NRPN LSB, MSB44
	100, 101	O	O *1	RPN LSB, MSB
	120	O	O *1	All sound off
	121	O	O *1	Reset all controllers
Prog		O	O *1	
Change	True #	******	0—127	Program Number 1—128
System Exclusive		O	O	
System	Song Pos	X	X	
Common	Song Sel	X	X	
	True	X	X	
System	Clock	X	X	
Real Time	Commands	X	X	
	Local ON/OFF	X	O	
AUX	All Notes OFF	O	O (123—125)	
Messages	Active Sense	O	O	
	Reset	X	X	
Notes		*1 O X is selectable *2 Recognize as m=1 even if m≠1 *3 The edit data is transmitted when Tone Change or Setup Send is made.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

EXPANDABLE SYNTHESIZER
Model JV-50
Sequencer section

MIDI Implementation Chart

Date : Oct. 15 1993
Version : 1.00

Function•••		Transmitted	Recognized	Remarks
Basic	Default	1—16	1—16	There is not a Basic
Channel	Changed	X	X	Channel
Mode	Default	Mode 3	X	
	Messages	OMNI OFF, POLY	X	*3
	Altered	******		
Note		0—127	0—127	
Number	True Voice	******	0—127	
Velocity	Note ON	O	O	
	Note OFF	O	O	
After	Key's	O	O	
Touch	Ch's	O	O	
Pitch Bend		O	O	
Control Change	0—120	O	O	
	121	O	O	Reset all controllers
Prog		O	O	
Change	True #	******	0—127	
System Exclusive		O	O	
System	Song Pos	O	X *4	
Common	Song Sel	O (0—98)	X (0—98) *4	
	True	O	O	
System	Clock	O *1	X *5	
Real Time	Commands	O *1	X *4	
	Local ON/OFF	O	O	
AUX	All Notes OFF	O (123)	O (123—127)	
Messages	Active Sense	O *2	O	
	Reset	X	X	
Notes		*1 Can be set and stored as O/X. *2 Can be set to O or X when booted up. *3 OMNI OFF and POLY ON are sent on all channels (1—16) when booted up. *4 It can receive data when Clock select is AUTO, MIDI or REMOTE. *5 It can receive data when Clock select is AUTO or MIDI.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

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Specifications

JV-50/35: Expandable Synthesizer
GM System/GS Format response

○ Keyboard
61 keys (with velocity)

○ Numbers of parts
16 (Two parts can be set in the drum part)

○ Maximum Polyphony
28 (Voices)

○ Effects
Reverb, Chorus

○ Internal Memory
Tone Preset: 226
User: 256
User Patch: 256 (VE-JV1 installed only)
Drum sets Preset: 9
User: 9
Performance: 8

○ Display
16 characters, 2 line

SMF Player section (JV-50 only)

○ Number of tracks
Format 0: 1 (16 channels)
Format 1: 17 (16 channels per track)

○ Time base
96, 120, 192, 240

○ Data format
Playback: Standard MIDI File (format 0 or 1)
Recording: Standard MIDI File (Format 0)

○ Tempo
5—260

○ Time signature (when recording)
4/4

○ Disk drive
3.5 inch, 2DD micro floppy disks only

○ Connectors
Audio output jack x 2 (L, R)
Headphone jack
Hold pedal jack
MIDI connectors JV-50: IN, OUT1, OUT2
JV-35: IN, OUT, THRU

○ Dimensions
JV-50: 1011 (W) x 289 (D) x 92 (H) mm
39-13/16(W) x 11-7/16(D) x 3-8/5(H) inch
JV-35: 1011 (W) x 289 (D) x 83 (H) mm
39-13/16(W) x 11-7/16(D) x 3-5/16(H) inch

○ Weight
JV-50: 6.6 kg / 14 lbs 9 oz
JV-35: 6.2 kg / 13 lbs 11 oz

○ Power consumption
JV-50: 1200 mA
JV-35: 1000 mA

○ Accessories
AC Adaptor JV-35: ACI-120J (117V)
ACI-220J (230V)
ACB-240(E) (240V)
ACB-240(A) (240V)
JV-50: ACK-120 (117V)
ACB-220 (230V)
ACB-240(E) (240V)
ACB-240(A) (240V)
Owner's Manual
Audio Calbe (PJ-1M) x 1
3.5 inch, 2DD micro floppy disk (JV-50 only)

○ Optional items
GS Voice Expantion :VE-GS1
JV Voice Expantion :VE-JV1
Pedal Seitch :DP-2/6, FS-5U (BOSS)
Keyboard Stand :KS-8
Stereo Headphone :RH-20/80/120
MIDI/SYNC Cable :MSC-07/15/25/50/100
Monitor Amp :MA-12 (BOSS)

** In the interest of product improvement, the specifications of this unit are subject to change without prior notice.*

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE : NEUTRAL
BROWN : LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

For Nordic Countries

Apparatus containing Lithium batteries

ADVARSEL!
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VARNING!
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!
Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VAROITUS!
Paristo voi räjahtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For Germany

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

Roland EXPANDABLE SYNTHESIZER JV-50, JV-35

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der BMPT-AmtsblVfg 243/1991 funk-entstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z. B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung.

Dem Zentralamt für Zulassungen im Fernmeldewesen wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf die Einhaltung der Bestimmungen eingeräumt.

Roland Corporation

4-16 Dojimahama 1-Chome Kita-ku Osaka 530 Japan

(Name und Anschrift des Herstellers/Importeurs)

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.

For Canada

CLASS B **NOTICE**
This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B **AVIS**
Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

JV-50 / JV-35

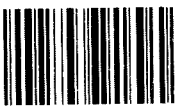
Roland Corporation

00234067 93-11-F3-11S

Roland®

70128190

UPC 70128190



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